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SUMMARY OF TRADE AND TARIFF INFORMATION

COMPLETED
87

Prepared in Terms of the Tariff Schedules of the United States

LEAD AND ZINC

TSUS Item Nos. 624.02-626.45 and 644.17, 644.18, 644.20, 644.28, and 644.30

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FOREWORD

Each Summary of Trade and Tariff Information is part of a series published by the United States International Trade Commission to provide information on conditions of competition between domestic and foreign products. This report, generally covering the period in 1977 through 1981, is one of many being published in the current series of summaries.

This series provides information on product uses, the domestic industry, U.S. consumption, production, and trade, and the competitiveness of U.S. producers in domestic and foreign markets in each commodity area. The summaries are cast in terms of the Tariff Schedules of the United States (TSUS).

The current series will consist of approximately 250 individual reports. The Commission will issue updated statistical tables and industry status reports as appropriate for individual summaries. The overall program will run several years, ultimately covering all items of the TSUS.

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CONTENTS

	Page
Foreword	i
Executive summary	
Lead	v
Zinc	v
Description and uses	
Lead	1
Zinc	3
Customs treatment:	
U.S. customs treatment	4
Foreign customs treatment	9
The U.S. industry:	
Basic data	
Lead	13
Zinc	13
Financial information	15
Prices	15
Marketing	17
The U.S. market:	
Domestic market profile	
Lead	17
Zinc	18
U.S. consumption	
Lead	19
Zinc	21
U.S. production	
Lead	23
Zinc	24
U.S. imports:	
Import trends	25
Imports under TSUS item 806.30	25
Imports under TSUS item 807.00	26
Imports under the Generalized System of Preferences	26
The international market:	
International market profile	27
U.S. exports	28
Appendix A. Part 2, subpart G, schedule 6, Part 3, subpart C schedule 6, Part 1, subpart B schedule 8, and Part 1, subpart B, schedule 9, of the Tariff Schedules of the United States Annotated (1982) and staged rates of duty	31
Appendix B. Concordance of TSUS numbers, Schedule B numbers, SIC numbers, SITC numbers, and CCCN numbers	51
Appendix C. Statistical tables	55

BEST DOCUMENT AVAILABLE

CONTENTS

Page

Tables

1. Lead: U.S. production, exports, imports, and apparent consumption, 1977-81---------- 56
2. Zinc: U.S. production, exports, imports, and apparent consumption, 1977-81---------- 57
3. Unwrought lead and waste and scrap: U.S. exports of domestic merchandise, by principal markets, 1977-1981---------- 58
4. Wrought lead: U.S. exports of domestic merchandise, by principal markets, 1977-81---------- 59
5. Unwrought zinc and waste and scrap: U.S. exports of domestic merchandise by principal markets, 1977-81---------- 60
6. Wrought zinc: U.S. exports of domestic merchandise, by principal markets, 1977-81---------- 61
7. Unwrought lead and waste and scrap: U.S. imports for consumption, by principal sources, 1977-81---------- 62
8. Wrought lead: U.S. imports for consumption, by principal sources, 1977-81---------- 63
9. Unwrought zinc and waste and scrap: U.S. imports for consumption, by principal sources, 1977-81---------- 64
10. Wrought zinc: U.S. imports for consumption, by principal sources, 1977-81---------- 65

Executive Summary

This summary covers lead and zinc metals, their alloys, basic shapes and forms, and also lead and zinc waste and scrap. Information on lead and zinc ores and concentrates is contained in USITC Publication 84, Control No. 6-1-15, A Summary of Trade and Tariff Information on ores and concentrates and other metal-bearing materials. Lead and zinc are important in many segments of the world economy. Principal uses for these metals have been developed in the following major industries: transportation, construction, communication, machinery and equipment, and containers and packaging.

Lead

The United States is the world's largest producer and consumer of lead. The domestic primary industry is composed of 3 companies which operate 6 smelters and/or refineries located in Montana, Texas, Nebraska, and Missouri. The secondary industry is composed of over 60 operating plants which produce lead and lead alloys from recycled materials. There are about 500 consuming firms located in virtually all of the States.

In 1981, imports of lead totaled 115,497 short tons, valued at $90 million, down from 270,009 short tons, valued at $157 million, in 1977. Exports decreased to 91,205 short tons, valued at $48 million, in 1981 from 95,251 short tons, valued at $31 million, in 1977. Production and consumption both decreased during the period. Production was down to 1,177,000 short tons, in 1981 from 1,140,034 short tons, in 1977. Reported consumption decreased to 1,026,000 short tons, in 1981 from 1,582,000 short tons, in 1977. Imports accounted for about 11 percent of consumption in 1980.

There are 12 major integrated foreign companies which produce lead. The major world markets are Italy, West Germany and the United Kingdom.

Zinc

The United States is the world's largest consumer of zinc and the third largest producer, with Japan and Canada being the largest producers. Four vertically integrated firms make up the primary zinc industry and are located in Illinois, Pennsylvania, Tennessee, and Texas. Twelve secondary smelters produce slab zinc from scrap. There are approximately 600 consuming firms, half of which are located in Illinois, Michigan, New York, Ohio, and Pennsylvania.

In 1981 imports of zinc totaled 690,461 short tons, valued at $562 million, from 573,405 short tons, valued at $368 million, in 1977. Exports increased to 44,273 short tons, valued at $32 million, in 1981 from 17,804 short tons, valued at $11 million, in 1977. Production decreased to 418,000 short tons in 1981 from 500,756 short tons in 1977. Reported consumption decreased to 829,656 short tons in 1981 from 1,101,765 short tons in 1977. Imports accounted for about 83 percent of domestic consumption in 1981.

The foreign zinc industry is dominated by large vertically integrated companies. The major world markets for zinc are the United States, West Germany, the United Kingdom and France.

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Commodity	TSUS item No.
Unwrought lead:	
Lead bullion	624.02
Other	624.03
Lead waste and scrap	624.04
Wrought lead:	
Plates and sheets	624.10 -.12, -.14, -.16
Strips	624.18, -.20
Cut, pressed, or stamped to nonrectangular shape	624.22, -.24
Bars, rods, angles, shapes, and sections; lead wire	624.30, -.32, -.34
Lead powder and flakes	624.40, -.42
Pipes and tubes	624.50, -.52, -.54
Lead foil	644.17, -.18, -.28
Unwrought zinc:	
Other than alloys of zinc	626.02
Alloys of zinc	626.04
Zinc waste and scrap	626.10
Wrought zinc:	
Plates, sheets and strips	626.15, -.17, -.18, -.20, -.22, -.24
Zinc wire	626.30, -.31
Bars, rods, angles, shapes and sections	626.35
Powders and flakes	626.40, -.42
Pipes and tubes	626.45
Zinc foil	644.20, -.30

Note.--For the statutory description of these articles, see excerpt from the Tariff Schedules of the United States Annotated (1982) (TSUSA) in appendix A. A concordance of the TSUSA items included in this summary with related categories in production, export, and import nomenclature is found in appendix B.

This summary covers lead and zinc, their alloys, and their basic shapes and forms, and also waste and scrap. Lead and zinc ores are mined and milled to prepare a concentrate that can be treated to recover lead and zinc and the associated byproduct and coproduct metals. Information on lead and zinc ores is contained in USITC Publication 841 Control No. 6-1-15, A Summary on Trade and Tariff Information on ores and concentrates and other metal-bearing materials.

Lead

Treatment of lead concentrates includes sintering or roasting, smelting, drossing, and refining. The sintering step agglomerates the fine concentrates

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and removes most of the sulfur as sulfur dioxide, which at most smelters goes to an acid plant to be converted to sulfuric acid.

The sintered product, along with coke, fluxes, and dross, is smeltered in a blast furnace to produce impure lead bullion, slag, and fume. The lead bullion goes from the blast furnace to the drossing kettle which is used to reduce impurities and to remove copper from the bullion. Refining of the lead bullion removes silver and any remaining copper and other elements.

Lead is a soft, heavy metal, malleable but only slightly ductile, and the most corrosion resistant of the common metals. Refined lead is metallic lead from which impurties have been removed by metallurgical processing; the minimum purity of refined lead is 99.85 percent. Such lead is marketed in four grades: corroding lead, a designation used to describe lead that has been refined to a high degree of purity; chemical lead, a term used to designate the relatively high purity, but undesilvered, lead recovered from southeast Missouri ore; acid-copper lead, made by adding copper to fully refined lead; and common desilverized lead, a designation used to describe fully refined desilverized lead.

Lead is produced in many forms, including ingots, pigs, sheet, foil, powder, wool, shot, coatings, pigments, laminations, extrusions, and castings.

Lead is often alloyed with other metals, principally antimony, calcium, and tin. These alloys are roughly classified as antimonial or hard lead, calcium lead, white metals, fusible alloys, and soft solders.

Lead is generally cast in pigs weighing approximately 45 kilograms or in jumbo blocks which weigh about 454 kilograms. Lead alloy is produced to meet customer specifications. The most common of these is antimonial lead, containing from 2 to 10 percent antimony, which is used in battery manufacture, cable extrusions, type metal, and for rolling purposes. The lead-antimony crystalline structure provides hardness not obtainable with other alloying elements. Lead alloys containing calcium, tin, selenium, cadmium, and copper or combinations thereof, are increasing in demand as new technology for maintenance-free batteries which require low-gassing nucleants is developed.

Metallic lead is used to manufacture the oxides of lead. Litharge is the most common of these chemicals and is used in the battery, glass, ceramic, rubber, and coatings industries.

The largest use of lead is in storage batteries vital to transportation, communications, and electric utilities. The second largest use of lead is as the active component of gasoline antiknock additives.

Lead sheet is used for radiation shielding, and vibration dampening. Lead is the most impervious of all common metals to X-ray and gamma radiation: it provides the most compact, lowest weight protection. Lead continues to be the major metal used for sporting ammunition in the form of shot and small-caliber bullets. In packaging, lead foil and sheet are used to contain radioactive materials for shipment and storage.

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Secondary lead is lead derived from the salvage of wornout end-product items, such as battery plates, cable coverings, and pipe and sheet, which are collected, remelted, and refined in secondary smelters to produce refined lead and various lead-base alloys. In recent years, lead reclaimed from old scrap materials has accounted for about 55 percent of total lead consumption.

Zinc

The treatment of zinc concentrates is accomplished by electrolytic deposition from a zinc sulfate solution or by the distillation in retorts or furnaces. In both methods, the zinc concentrate is first roasted to eliminate most of the sulfur and produce impure zinc oxide known as roasted concentrate or calcine.

A blast-furnace process for producing zinc, also known as the Imperial Smelting Process, follows the normal blast-furnace practice of burning coke in intimate association with the ore to be reduced, but as in the retort process, the zinc is released as a vapor and condensed. Several new plants of this type have recently begun operating, and the process contributes one-tenth of world capacity. An important advantage claimed for the process is the ability to treat a mixed lead-zinc concentrate and recover both metals, as well as any gold and silver present, with no extra coke consumption and little extra labor.

Zinc is a bluish-white metal which is chemically active and alloys readily with other metals; these properties are utilized industrially in preparing a large number of zinc-containing alloys and compounds.

Zinc produced from ores is termed "primary zinc." When zinc is produced from scrap or residues it is termed "secondary," "redistilled," or "remelt" zinc, depending on the recovery process. Primary zinc is categorized as electrolytic or distilled zinc according to the reduction process used. Refined zinc refers to an upgraded distilled zinc; it is sometimes produced by repeating the original process, and is then designated as redistilled zinc. Compositions of the commercial grades of zinc metal are established by the American Society of Testing and Materials (ASTM). Prime Western zinc was the first specification and was established for hot-dip galvanizing. Two other grades of zinc galvanizing supplied to customer specifications have gained acceptance. Continuous Galvanizing Grade contains up to 0.35 percent lead and some aluminum, whereas Controlled Lead Grade contains less than 0.18 percent lead and no aluminum. Brass Special and Intermediate grades, specified grades until 1977, were largely used in alloying with copper to form brass. High Grade, and later Special High Grade, were established when alloys containing small amounts of aluminum began to be used in diecasting intricate functional parts to very close dimensional tolerances.

Commercial zinc cast in various shapes and sizes is termed slab zinc. The slabs typically weigh 25 kilograms but could weigh 227 to 907 kilograms. Each slab is identified as to grade and producer by the registered brand name cast into the metal.

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Zinc metal is used in galvanizing, brass and bronze products, castings, and rolled zinc. Zinc compounds are used in significant quantities as pigments and other chemicals. The largest single use of zinc is in die-casting for automobile components. Rolled zinc is used for dry-cell battery cases, weatherstripping, and lithographic plates. There are a number of miscellaneous uses for zinc metal. An important item is sacrificial anodes used to protect ship hulls, offshore oil-drilling and production platforms, and submerged steel work and pipes.

Zinc diecasting alloys are any of several zinc-base alloys in which aluminum and copper are the principal alloying elements.

Customs Treatment

U.S. customs treatment

Tariff provisions and duty rates applicable to lead and zinc and lead and zinc products are found in parts 2 and 3 of schedule 6 of the TSUS. The following table shows the current rates of duty which apply to imports of lead and zinc and lead and zinc products from those countries having most-favored-nation (MFN) status (column 1), 1/ the negotiated column 1 rates of duty under the most recent Multilateral Trade Negotiations (MTN), 2/ the rates of duty which apply to imports from countries designated in the TSUS as being under Communist domination or control (column 2), 3/ and a reference as to the eligibility for duty-free treatment under the Generalized System of Preferences (GSP). 4/ Four communist countries, including the People's Republic of China, Poland, Romania, and Yugoslavia, are currently eligible for MFN treatment.

1/ The rates of duty in rate of duty column numbered 1 are most-favored-nation (MFN) rates, and are applicable to imported products from all countries except those Communist countries and areas enumerated in general headnote 3(f) of the TSUS. However, such rates would not apply to products of developing countries which are granted preferential tariff treatment under the GSP or under the "LDDC" rate of duty column.

2/ The rates of duty in the negotiated rate of duty column numbered 1 are preferential rates (reflecting the full U.S. MTN concession rate for a particular item without staging of duty reductions) and are applicable to products of the least developed developing countries designated in general headnote 3(d) of the TSUS which are not granted duty-free treatment under the GSP. If no rate of duty is provided in this column for a particular item, the rate of duty provided in column numbered 1 applies. The most recent (seventh) round of multilateral trade negotiations--referred to as the Tokyo round--was held from 1973 to 1979 under the General Agreement on Tariffs and Trade.

3/ The rates of duty in rate of duty column numbered 2 apply to imported products from those Communist countries and areas enumerated in general headnote 3(f) of the TSUS.

4/ The GSP, implemented by Executive Order No. 11888 of Nov. 24, 1975, applies to merchandise imported on or after Jan. 1, 1976, and is scheduled to remain in effect until Jan. 4, 1985. The GSP provides for duty-free treatment of eligible articles imported directly from designated beneficiary developing countries.

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Lead: U.S. rates of duty, present and negotiated, by TSUSA items

TSUSA item No.	Description	Present col. 1 rate of duty 1/	Negotiated col. 1 rate of duty 2/	Col. 2 rate of duty 3/	GSP eligibility
	Unwrought lead:				
	Lead bullion	3.5% ad val. on the value of the lead content.	3.5% ad val. on the value of the lead content.	10.5% ad val.	Yes.
624.0220	Lead bullion---- ---------- ---------- lead content				
624.0240	Gold content				
624.0260	Silver content				
	Other	3.5% ad val. on the value of the lead content 4/	3.5% ad val. on the value of the lead content	10% ad val.	No.
624.0330	Alloyed---- lead content				
624.0350	Other---------- lead content				
624.0400	Lead waste and scrap---------- lead content	3.2% ad val. on the value of the lead content	2.3% ad val. on the value of the lead content	11.5% ad val.	Yes.
	Plates, sheets, and strips, all the foregoing which are wrought, of lead, whether or not cut, pressed, or stamped to nonrectangular shapes:				Yes.
	Not cut, not pressed, and not stamped to nonrectangular shapes:				
	Plates and sheets:				
	Not clad:				
624.1000	Other than alloys of lead----------	3.1% ad val.	2.7% ad val.	10% ad val.	Yes.
	Of alloys of lead:				
624.1200	Valued not over 13-1/3 cents per pound---	0.75¢ per lb.		6¢ per lb.	Yes.
624.1400	Valued over 13-1/3 cents per pound-------	4.9% ad val.	3.9% ad val.	45% ad val.	Yes.
624.1600	Clad----------	9.9% ad val.	6.5% ad val.	30% ad val.	Yes.
	Strips:				
624.1800	Valued not over 13-1/3 cents per pound-------	5.3% ad val.	4.2% ad val.	47% ad val.	Yes.
624.2000	Valued over 13-1/3 cents per pound----------	4.9% ad val.	3.9% ad val.	45% ad val.	Yes.
	Cut, pressed, or stamped nonrectangular shapes:				Yes.
624.2200	Valued not over 13-1/3 cents per pound---------	2.8% ad val.	2.5% ad val.	44% ad val.	Yes.
624.2400	Valued over 13-1/3 cents per pound----------	4.9% ad val.	3.9% ad val.	45% ad val.	Yes.
	Bars, rods, angles, shapes, and sections, all the foregoing which are wrought, of lead; lead wire:				
624.3000	Glazier's lead and lead wire----------	1.2% ad val.	1.2% ad val.	10% ad val.	Yes.
	Other:				
624.3200	Valued not over 13-1/3 cents per pound---------	9.5% ad val.	6.3% ad val.	45% ad val.	Yes.
624.3400	Valued over 13-1/3 cents per pound----------	9.4% ad val.	6.2% ad val.	45% ad val.	Yes.

See footnotes at end of table.

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Lead: U.S. rates of duty, present and negotiated, by TSUSA items--Continued

TSUSA item No.	Description	Present col. 1 rate of duty 1/	Negotiated col. 1 rate of duty 2/	Col. 2 rate of duty 3/	GSP eligibility
	Lead powder and flakes:				
624.4000	Valued not over 13-1/3 cents per pound	11.9% ad val.	11.9% ad val.	45% ad val.	Yes.
624.4200	Valued over 13-1/3 cents per pound	11.25% ad val.		45% ad val.	Yes.
	Pipes and tubes and blanks therefor, pipe and tube fittings, all the foregoing of lead:				
624.5000	Of lead other than alloys of lead	2.4% ad val.	2% ad val.	10% ad val.	Yes.
	Of alloys of lead:				
624.5200	Valued not over 13-1/3 cents per pound	5.3% ad val.	4.2% ad val.	44% ad val.	Yes.
624.5400	Valued over 13-1/3 cents per pound	4.9% ad val.	3.9% ad val.	45% ad val.	Yes.
	Lead foil:				
644.1700	Valued not over 13-1/3 cents per pound	6.1% ad val.	4.7% ad val.	28% ad val.	Yes.
644.1800	Valued over 13-1/3 cents per pound	4.9% ad val.	3.9% ad val.	45% ad val.	Yes.
	Cut to shape but not backed:				
644.2800	Lead foil	4.3% ad val.	2.2% ad val.	45% ad val.	Yes.

1/ Effective Jan. 1, 1982.
2/ Rate negotiated under the Tokyo round of the Multilateral Trade Negotiations to be achieved through 8 annual staged reductions. This rate is currently applicable to products from countries designated as "least developed developing countries."
3/ Rate provided in the Tariff Act of 1930.
4/ Duty temporarily reduced to 3 percent ad valorem on the value of the lead content, but not less than 1.0625 cents per pound on the lead content.

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Zinc: U.S. rates of duty, present and negotiated, by TSUSA items

TSUSA item No.	Description	Present col. 1 rate of duty 1/	Negotiated col. 1 rate of duty 2/	Col. 2 rate of duty 3/	GSP eligibility
	Unwrought zinc:				
626.0200	Other than alloys of zinc	1.8% ad val.	1.5% ad val.	1.75¢ per lb.	No.
626.0400	Alloys of zinc	19% ad val.		45% ad val.	No.
626.1000	Zinc waste and scrap	4% ad val. 4/	2.1% ad val.	11% ad val.	No.
	Plates, sheets, and strip, all the foregoing which are wrought, of zinc, whether or not cut, pressed, or stamped to nonrectangular shapes:				
	Not clad:				Yes.
	Other than alloys of zinc:				Yes.
	Not cut, not pressed, and not stamped to nonrectangular shapes:				Yes.
626.1500	Rolled in one direction only	8.1% ad val.	5.7% ad val.	45% ad val.	Yes.
	Rolled and cross rolled:				Yes.
626.1700	Not coated or plated with metal	0.9% ad val.	0.9% ad val.	4% ad val.	Yes.
626.1800	Coated or plated with metal	5.3% ad val.	4.2% ad val.	24% ad val.	Yes.
626.2000	Cut, stamped, or pressed to non-rectangular shapes:	8.1% ad val.	5.7% ad val.	45% ad val.	Yes.
626.2200	Alloys of zinc	8.9% ad val.	5.7% ad val.	45% ad val.	Yes.
626.2400	Clad	9.9% ad val.	6.5% ad val.	30% ad val.	Yes.
	Zinc wire:				
626.3000	Not coated or plated with metal	5.3% ad val.	4.2% ad val.	25% ad val.	Yes.
626.3100	Coated or plated with metal	5.3% ad val.	4.2% ad val.	25.5% ad val.	Yes.
626.3500	Bars, rods, angles, shapes and sections, all the foregoing which are wrought, of zinc.	8.1% ad val.	5.7% ad val.	45% ad val.	Yes.
	Zinc powders and flakes:				
626.4000	Dust	0.3¢ per lb.		1.75¢ per lb.	Yes.
626.4200	Other	9.5% ad val.		45% ad val.	Yes.

See footnotes at end of table.

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Zinc: U.S. rates of duty, present and negotiated, by TSUSA items--Continued

TSUSA item No.	Description	Present col. 1 rate of duty 1/	Negotiated col. 1 rate of duty 2/	Col. 2 rate of duty 3/	GSP eligibility
626.4500	Pipes and tubes and blanks therefor, pipe and tube fittings, all the foregoing of zinc	7.4% ad val.	3.8% ad val.	45% ad val.	Yes.
	Base metal foil (whether or not embossed, cut to shape, perforated, etched, coated, printed, colored, decorated, or backed with paper or equivalent backing) not over 0.006 inch in thickness (excluding any coating or backing):				
	Not backed and not cut to shape:				
644.2000	Zinc foil	7.4% ad val.	3.8% ad val.	45% ad val.	Yes.
	Cut to shape, but not backed:				
644.3000	Zinc foil	8.1% ad val.	5.7% ad val.	45% ad val.	Yes.

1/ Effective Jan. 1, 1982.
2/ Rate negotiated under the Tokyo round of the Multilateral Trade Negotiations to be achieved through 8 annual staged reductions. This rate is currently applicable to products from countries designated as "least developed developing countries."
3/ Rate provided in the Tariff Act of 1930.
4/ Duty temporarily suspended.

The Commission instituted an investigation on December 29, 1977, under section 201 of the Trade Act of 1974. The petition was filed by the Lead-Zinc Producers Committee. On June 20, 1977 the Commission found that the U.S. industry was not seriously injured by imports of unalloyed, unwrought zinc.

The duty on unwrought lead other than lead bullion (TSUS item 624.03) was temporarily reduced to 3 percent ad valorem on the value of the lead content, but not less than 1.0625 cents per pound on the lead content (TSUS item 911.50). 1/ This will be in effect until June 30, 1983.

The duty on zinc waste and scrap (TSUS item 626.10) has been temporarily suspended until June 30, 1984 (TSUS item 911.03). 1/

Foreign customs treatment

Most countries, except the United States and Canada, use the Customs Cooperation Council Nomenclature (CCCN) as the basis for their tariff classifications. 2/

Lead and articles thereof are found in chapter 78 of the CCCN. Heading 78.01 covers unwrought lead and lead waste and scrap. Heading 78.02 covers wrought bars, rods, angles, shapes, and sections of lead and lead wire. Heading 78.03 covers wrought plates, sheets, and strip, of lead. Heading 78.04 covers lead foil and lead powder and flakes. Heading 78.05 covers tubes and pipes and blanks therefor, of lead, and hollow bars of lead and tube and pipe fittings of lead. Heading 78.06 covers containers with an antiradiation lead cover and other articles of lead.

Zinc and articles thereof are found in chapter 79 of the CCCN. Heading 79.01 covers unwrought zinc and zinc waste and scrap. Heading 79.02 covers wrought bars, rods, angles, shapes and sections of zinc and zinc wire. Heading 79.03 covers wrought plates, sheets and strip of zinc, zinc foil, and zinc powders and flakes. Heading 79.04 covers tubes and pipes and blanks therefor, of zinc, and hollow bars and the tube and pipe fittings of zinc. Heading 79.06 covers gutters, roof capping, skylight frames, and other fabricated building components of zinc.

In the Canadian tariff schedules, lead and lead products are found in items 33600-1 (tea lead) to 34405-2 (composition foils, composed of varying percentages of lead and whether or not containing antimony). Zinc and zinc products are found in items 34500-1 (zinc dross and zinc scrap for remelting, or for processing into zinc dust) to 34605-1 (zinc or zinc alloys).

1/ See excerpt from TSUSA in app. A.
2/ For a concordance of tariff numbers, see app. B.

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The present rates of duty for Canada, and the European Community (EC) for lead and zinc and lead and zinc products are shown in the following table.

Lead and zinc: Selected rates of duty, present and negotiated, in principal foreign markets for U.S. exports

Market	Description of commodity and foreign tariff number	Present rate of duty 1/	Negotiated rate of duty 2/
Canada	Tea lead (33600-1)	Free 3/	4.3%
	Lead, old, scrap pig and block (33700-1).	Free	Free.
	Lead, in bars and sheets (33800-1).	4.8% ad val.	4% ad val.
	Lead manufactures of n.o.p. (33900-1).	15.7% ad val.	10.2% ad val.
	Lead capsules for bottles (33905-1).	15.7% ad val.	10.2% ad val.
	Collapsible tubes of lead or tin or lead coated with tin (33910-1).	15.7% ad val.	10.2% ad val.
	Composition foils, composed of varying percentages of lead and whether or not containing antimony (34405-2).	15.7% ad val.	10.2% ad val.
	Zinc dross and zinc scrap for remelting, or for processing into zinc dust (34500-1).	Free	Free.
	Zinc spelter, zinc, and zinc alloys containing not more than 10 percent by weight of other metal or metals, in the form of pigs, slabs, blocks, dust or granules (34505-1).	Free	Free.
	Zinc, manufactures of n.o.p. (34600-1).	15.7% ad val.	10.2% ad val.
	Unwrought zinc alloys, n.o.p. (34600-2).	17.5% ad val.	17.5% ad val.
	Zinc rods; zinc shapes other than flat-rolled; all the foregoing if containing not more than 10 percent by weight of other metal or metals (34601-1).	Free	Free.

See footnotes at the end of table.

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Lead and zinc: Selected rates of duty, present and negotiated, in principal foreign markets for U.S. exports--Continued

Market	Description of commodity and foreign tariff number	Present rate of duty 1/	Negotiated rate of duty 2/
Canada (Con.)	Zinc or zinc alloys containing not more than 10 percent by weight of other metal or metals, in the form of foil, ribbon, strip, sheet, plate, discs or slugs; coated or not (34605-1).	7% ad val.	5.5% ad val.
	Zinc strip and sheet, ungrained, whether or not ground for making offset plates for lithographing, zinc strip, or sheet, not ground or polished coated on side with acid-resisting materials when imported for use by grinders and polishers to be prepared for use in photoengraving; all the foregoing if containing not more than 10 percent by weight of other metal or metals.	Free	Free.
EC	Unwrought lead for refining, containing 0.02 percent or more by weight of silver (bullion lead) (78.01-A-I).	Free	Free.
	Other unwrought lead (78.01 AII).	3.5% ad val.	3.5% ad val.
	Lead waste and scrap (78.01 B)	Free	
	Wrought bars, rods, angles, shapes and sections, of lead lead wire (78.02).	9.8% ad val.	8% ad val.
	Wrought plates, sheets and strip of lead (78.03).	9.8% ad val.	8% ad val.
	Lead foil, backed (78.04 A I)	9.8% ad val.	8% ad val.
	Lead foil, other (78.04 A II)	9.8% ad val.	8% ad val.
	Lead powder and flakes (78.04 B).	2.5% ad val.	2.2% ad val.
	Tubes and pipes and blanks therefor, of lead; hollow bars, and tube and pipe fittings of lead (78.05).	10.8% ad val.	9% ad val.
	Containers with an antiradiation lead cover, for the transport or storage of radioactive materials (78.06 A).	6% ad val.	6% ad val.

See footnotes at end of table.

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Lead and zinc: Selected rates of duty, present and negotiated, in principal foreign markets for U.S. exports--Continued

Market	Description of commodity and foreign tariff number	Present rate of duty 1/	Negotiated rate of duty 2/
EC (Con.)	Other articles of lead (78.06 B).	8.4% ad val.	8% ad val.
	Unwrought zinc (79.01 A)	3.5% ad val.	3.5% ad val.
	Zinc waste and scrap (79.01 B)	Free	Free.
	Wrought bars, rods, angles, shapes and sections, of zinc, zinc wire (79.02).	9.8% ad val.	10% ad val.
	Wrought plates, sheets, and strip, of zinc, zinc foil (79.03 A).	9.8% ad val.	8% ad val.
	Zinc powders (including dust) and flakes (79.03 B).	5.8% ad val.	4.4% ad val.
	Tubes and pipes and blanks therfor, of zinc, hollow bars and tube and pipe fittings of zinc (79.04).	9.8% ad val.	8% ad val.
	Gutters, roof capping, skylight frames and other fabricated building components (79.06 A).	7% ad val.	7% ad val.
	Other articles of zinc	7.9% ad val.	7% ad val.

1/ Rates currently applicable to imports from the United States.
2/ Final rates negotiated under the Multilateral Trade Negotiations.
3/ Base rate not bound by GATT.

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The U.S. Industry

Basic data

Lead.--The U.S. primary lead industry is composed of three companies which operate smelters and/or refineries in Montana, Texas, Nebraska, and Missouri. Of these, two are fully integrated producers. These companies operate combination smelter-refineries in Missouri to treat the concentrates from their own mines. The one other company is a custom refiner. A major producer closed its lead-zinc smelting complex during 1981. High losses in the first half of 1981 at the smelting refining operation, coupled with relative low metal prices, and high cost of feed materials, were among the reasons cited for the closure.

The secondary lead industry is of major importance in the domestic supply pattern, and lead recovered from old scrap materials has exceeded domestic mine production in recent years. In 1981, approximately 60 plants produced lead and lead alloys for industrial use from recycled materials, principally old batteries.

Economic highlights in the primary lead industry for the past five years are shown in the following table.

Highlights of the U.S. primary lead industry, 1977-81

Item	1977	1978	1979	1980	1981
Industry (SIC) 3332:					
Value of shipments million dollars	699.6	866.2	1,376.3	876.6	819.4
Value added-------do	191.7	250.0	323.9	240.0	1/
Total employment thousands	2.5	3.0	3.1	2.9	3.0
Production workers do	2.0	2.4	2.4	2.3	2.3
Average hourly earnings----dollars	7.37	7.94	9.02	9.84	11.10
Capital expenditures million dollars	1/	36.3	25.1	1/	1/

1/ Not available.

Source: Bureau of Census, Bureau of Labor Statistics, Bureau of Industrial Economics.

Zinc.--Four large vertically integrated firms with mines, smelters, and refineries are prominent in the U.S. primary zinc industry. They are located in Illinois, Pennsylvania, Tennessee, and Texas. There is one custom producer of slab. A significant portion of U.S. zinc production is by companies that are a part of large diversified corporations, three of which are also lead producers. In December 1979, one major smelter was closed, but by yearend

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1980, the plant was reopened on a limited basis. At the same time, another company phased out slab zinc at its vertical retort plant but continued production of zinc oxide. Over the past 10 years, such closures--largely resulting from weak demand, environmental compliance regulations, and changing consumption patterns--have reduced total domestic annual production capacity of zinc by nearly 61 percent to 500,000 short tons. In addition, there were about a dozen secondary distillation plants with a total slab zinc capacity of 51,000 tons.

Recovery of zinc from old scrap, mainly in the form of die castings, engravers' plate, and brass and bronze, currently represents about 6 percent of the total supply. New scrap comes principally from zinc-base and copper-base alloys from manufacturing operations and from drosses and skimmings from galvanizing and diecasting operations. New scrap is either sold to smelters or processed by the company that generates it as runaround scrap. The large use of zinc in galvanizing and in compounds in which the zinc is lost is a major obstacle to increased recycling. The zinc-base alloys are recovered by remelting and redistillation of commercial zinc products, whereas the copper-base alloys are remelted, and the contained zinc is reused in brass and bronze ingot.

The area of major potential in recovery of old scrap is the salvage of diecastings from scrapped automobiles and appliances. There are about 180 automobile shredders in the United States. It is estimated that about 180,000 tons of zinc diecastings are contained in the cars currently being scrapped.

Economic highlights in the primary zinc industry for the past 5 years are shown in the following table.

Highlights of the U.S. primary zinc industry, 1977-81

Item	1977	1978	1979	1980	1981
Industry (SIC 3333):					
Value of shipments					
million dollars	430.7	404.8	574.0	403.0	503.0
Value added------do----	114	100	144	105	133
Total employment					
thousands	4.6	4.6	5.1	4.5	4.5
Production workers					
do----	3.5	3.5	4.0	3.3	3.3
Average hourly					
earnings----------	7.14	8.04	9.09	9.97	11.25
Capital expenditures---	39.8	85.5	15.5	1/	1/

1/ Not available.

Source: Bureau of Census, Bureau of Labor Statistics, Bureau of Industrial Economics.

Financial information

Detailed financial data on the lead and zinc industries are not available, since a significant portion of domestic production is derived from companies that are part of larger corporations with diverse activities. The average ratio of net income to net worth of three major corporations was about 15 percent in 1980.

In 1978, the U.S. Environmental Protection Agency (EPA) issued final regulations on effluent limitations for zinc-mining facilities that limit water discharges from mines and mills to maximums of 1.5 and 1.0 milligram respectively, of zinc per liter per day. From 1972 to 1975, the cost of pollution control equipment to the lead and zinc industry, mainly at the smelting and refining stage, was 28 percent of the total capital investment.

Also in 1978, EPA established a national ambient air quality standard for lead. The EPA standard limited airborne lead to 1.5 milligrams per cubic meter. At that time, EPA estimated industry compliance costs would be $530 million in capital expenses and $120 million in operating costs. The domestic lead industry challenged this standard, holding that the new regulation could force all lead plants to close because the industry did not have the technology to meet the limits. The industry also held that, if the technology could be developed, EPA's cost estimates were too low.

In 1980, the U.S. Court of Appeals upheld the EPA regulation. The regulation requires compliance with the new standard by 1982 and calls for the States to issue compliance plans.

Prices

Lead and zinc are internationally traded commodities and are listed on the London Metal Exchange (LME). Until 1964, LME pricing was the benchmark for pricing metals as well as concentrates. In 1964, the European producer price was introduced by the European zinc smelters and by the integrated Canadian and Australian mining companies in pound sterling. The European producer price is the price at which concentrates are sold to non-U.S. smelters worldwide and the base price for sales by European smelters and the integrated mining companies in Western Europe and other traditional markets. In 1976, the price was changed into U.S. dollars.

The U.S. producer price for lead is usually 2-1/2 to 3 cents per pound above the LME, and that of zinc is usually 3 to 5 cents per pound above the LME. This price differential is to cover ocean freight, import duty, and dock charges. The price of lead is also influenced by the availability of secondary lead and stockpile policies with respect to purchases and disposals of lead. In 1930, the narrowed differential between the quoted U.S. price and the LME price stimulated a large volume of lead metal exports.

During 1981, lead prices related more to reductions in supply than to increases in demand. Strikes caused domestic producer prices to rise from about 30 cents per pound in February to a high of 45 cents per pound by late August. Upon settlement of one of the strikes, prices came under pressure,

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dropping to 40 cents per pound by late September. Prices averaged about 36.5 cents per pound during 1981, the lowest level since 1978.

In August 1980, U.S. zinc producers changed the pricing system from one based on Prime Western Grade to a system based on High Grade zinc to reflect the premium from electrolytic plants.

In spite of relatively poor demand, domestic zinc prices increased from an average 37.4 cents per pound in 1980 to 44.5 cents per pound in 1981. The price increase is attributed more to supply factors rather than to increases in demand. The supply of zinc concentrates both on domestic and on world markets remained tight. The lack of concentrates, coupled with strikes at Ireland's large Tara project and at some domestic operations, caused prices to firm early in the year, then to increase beginning in the second quarter.

The following tables show the U.S. producer prices and LME prices for lead, and U.S. producer prices, LME prices, and European prices for zinc.

Lead: Average annual U.S. producer price and London Metal Exchange (LME) price, 1977-81

(In cents per pound)

Year	U.S. producer	LME
1977	30.7	28.0
1978	33.7	29.9
1979	52.6	54.6
1980	42.5	41.2
1981	36.5	33.3

Source: Metals Week; LME Settlement Price Monthly Average.

Zinc: Average annual U.S. producer price, London Metal Exchange (LME) price, and European producer price, 1977-81

(In cents per pound)

Year	U.S. producer	LME	European
1977	34.392	27.120	32.621
1978	30.971	27.244	27.544
1979	37.296	34.152	35.966
1980	37.428	35.036	36.208
1981	44.500	41.300	38.932

Source: Metals Week; LME Settlement Price Monthly Average.

Marketing

Lead-and zinc-bearing ores and concentrates produced by independent mining companies are sold to smelting or refining companies on the basis of contracts setting forth the schedule of delivery and terms of payment. In most cases, the contracts are longterm, usually covering a period of several years. The ores and concentrates produced by such mines are usually channeled to the nearest smelter/refinery to minimize transportation costs.

Lead refineries generally sell their output on the basis of long-term contracts--this arrangement apparently accounts for the bulk of annual sales--and on the basis of spot sales from plant inventory.

Domestically produced slab zinc is marketed directly by the producer, through sales agents or through firms called merchants or traders. These particular firms purchase zinc from both foreign and domestic sources and sell it to consumers or other merchants as market conditions warrant. Prices are quoted on a delivered basis with shipments made by water, rail, or truck depending on available facilities. Domestic producers tend to market their output in their own geographical area of the country, tailoring their output grades to their customers within that area. However, all domestic producers will sell their output anywhere in the United States, upon demand.

The U.S. Market

Domestic market profile

Lead.--Lead consumed in battery applications is the single largest market for lead. Lead storage batteries furnish emergency power for hospitals, theaters, and stores, and power for portable tools, golf carts, lawn mowers, forklift trucks, and portable pumps. Storage batteries for use in automobiles contain about 10 kilograms of lead and have an average life expectancy of 3 to 4 years.

Several alternate combinations of metals and nonmetals can be used as batteries to store electric energy. Some of the battery technologies that are being studied as possible alternatives to the lead-acid system include nickel-zinc, zinc-iron, and lithium metal sulfide. Most of these batteries can match or exceed the electrical properties of the lead-acid cell; however, the cost of components and operating difficulties have precluded any current large-scale commercial use.

The second largest use for lead is in tetraethyl lead (TEL), which is the active component of gasoline antiknock additives. Lead, tetraethyl or tetramethyl, improves the performance of high-compression engines by controlling the flame propagation rate. This results in even combustion and greater efficiency.

The transportation industry also requires lead alloys for bearings and balances for automobile and trailer wheels.

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The construction industry is also an important consumer of lead. Lead piping and calking is still required in many building and plumbing codes, largely because of its pliability and corrosion resistance, but plastics are rapidly gaining popularity owing to the ease of installation and lower cost. Other competing products include plastics, galvanized steel, copper, and aluminum. Plastic and asbestos-cement pipe are substitutes for lead pipe. Stainless steel, titanium, plastics, and cement are alternate materials in corrosive chemical environments, and plastics are used in calking and jointing techniques.

The communications industry long depended on lead in providing trouble-free transmission. Storage batteries provide emergency power for telephone and radio service. Lead cable covering permits underground and underwater cables to function without danger of interruption caused by corrosion or moisture. Intercontinental cable continues to rely on lead for protection, but plastic coverings have supplanted lead in recent years for critical services. Polyethylene and combinations of metallic and organic materials are replacing lead in cable coverings where extreme corrosion is not a problem.

Zinc.--The construction industry is the major market for galvanized steel, used for structural steel, roofing, siding, guttering, and reinforcing bars. Galvanized sheet is the standard duct material for air-conditioning, ventilating, and heating systems, and is used for channels and conduits for electrical and telephone wires in large buildings. Zinc dust paints are growing in importance for primers and complete protective systems for structural steel. Zinc oxide is used in the production of oil-based paints and is a necessary ingredient of some latex paints to prevent mildew. Brass and zinc-bearing bronze find widespread use in architectural construction and building hardware. Brass fittings such as faucets and valves are important to the plumbing and heating industries, as are brass condenser and heat exchanger tubes. Rolled zinc sheet and strip are used extensively for rainwater gutters and pipes, roof coverings, and flashing in Western Europe, but very little zinc is used in such applications in other countries.

The transportation industry, which includes automobiles, aircraft, ships, buses, trucks, trailers, motorcycles, bicycles, railway rolling equipment, and massive belt conveyor systems, is an important consumer of zinc for galvanized steel sheet, die-cast alloys, brass, and zinc oxide. In recent years, there has been significant growth in the use of galvanized automobile underbody parts to overcome corrosion problems caused by deicing salts used in winter. The largest single use of zinc is in die castings for automobile components. Brass is used for radiators, tubing, and decorative trim. About one-half of the total consumption of zinc oxide is for rubber manufacture, and the major use of rubber is in automobile tires.

Zinc is used in form of galvanized ferrous castings, die-cast parts, brass stampings and pressings, zinc sheet and strip, and zinc oxide in electrical equipment and supplies used in appliances and office equipment.

Machinery, including that for agriculture, road building, excavating, materials handling, and many types of mechanical equipment in manufacturing plants, uses zinc consumed in galvanizing, die castings, and brass.

Rolled zinc serves small but important markets for dry-cell battery cases, weatherstripping, and lithographic plates.

In 1981, the U.S. Treasury announced plans to discontinue production of the copper penny, which contains 95 percent copper and 5 percent zinc, and convert to a zinc penny, which contain 98 percent zinc with a 2 percent copper coating. The action was taken because the price of refined copper is substantially higher than that of zinc.

Substitution for zinc depends on price and availability of substitutes as well as their technical suitability. Technological developments in the use of zinc in galvanizing and die casting have maintained its position in the construction and appliance industries, and to a lesser extent in transportation, despite competitive developments in aluminum and plastics.

Aluminum and magnesium are competitive materials in die casting where weight limitations and reductions or surface finishes are important factors. Plastics are rapidly entering this field as improved techniques permit acceptable plating or other surface-finishing techniques. However, the development of thin-wall diecasting and improved zinc alloys and finishing techniques has allowed diecasting to retain some of its applications in the transportation and appliance industries. The price of zinc relative to that of aluminum and plastics and public preference for metal parts because of their durability will be major factors affecting the use of zinc.

There is no satisfactory substitute for galvanizing for the large-tonnage applications in iron and steel products. A coating of a zinc-aluminum alloy could replace galvanized steel in some transportation and construction uses. Competitive materials for limited application are ceramic and plastic coatings, electroplated cadmium and aluminum, and special steels. Aluminum sheet is a competitive material with galvanized steel sheet in roofing and siding.

Aluminum alloys, stainless steels, and plastics have replaced a significant tonnage of brass in building and marine hardware, plumbing goods, and bearings.

The competition of alternate materials is of greater significance in the chemical and pigment applications of zinc. Aluminum and magnesium replace zinc to some extent as reducing agents in chemical reactions, and titanium oxide can replace zinc oxide in paint. Zirconium compounds are competitive in ceramic and enamel applications.

U.S. consumption

Lead.--Most major lead markets declined in 1981. As shown in the following table, total reported consumption of lead dropped to 1,026,000 short tons in 1981, down from 1,582,000 in 1977. During 1981, the consumption of lead for storage batteries dropped 30 percent during the period to an estimated 661,000 short tons. The overall decline in domestic auto production directly cut demand for new batteries. In addition, the trend toward smaller automobiles, which use smaller batteries and less lead, contributed to the decline in demand.

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The tetraethyl lead (TEL) market for lead has been declining due to Environmental Protection Agency (EPA) regulations restricting the use of lead in gasoline. The use of leaded gasoline has also been declining due to the adoption of catalytic converters on U.S.-produced automobiles, beginning in 1975, because leaded gasoline fouls the converter. The restrictions on leaded gasoline coupled with an overall reduction in gasoline consumption caused TEL demand to drop 47 percent to 123,000 short tons in 1981 from 232,000 short tons in 1977.

Lead use in pigments dropped about 28 percent during 1977-81, to 72,000 short tons in 1981, mostly as a result of decreased construction industry. The following table indicates the trends in lead consumption during 1977-81.

Lead: U.S. consumption, by end uses, 1977-81

(In thousands of short tons)

Item	1977	1978	1979	1980	1981
Ammunition--shot and bullets	68	61	59	54	56
Bearing metals	12	10	11	9	7
Brass and bronze billets and ingots	17	18	21	15	12
Cable coverings--power and communication	15	15	18	15	13
Calking lead--building construction	10	10	9	6	2
Casting metals	6	3	25	21	10
Pipes, traps, and other extruded products	12	12	8	9	1/
Sheet lead	17	14	23	22	6
Solder	64	75	60	46	26
Storage battery grids, post, etc	459	455	414	333	292
Storage battery oxides	487	514	484	378	369
Terne metal--motor vehicles and equipment	2	4	5	3	5
Type metal--printing and allied industries	13	12	11	10	8
Other metal products 2/	30	32	13	12	6
Total, metal products	1,210	1,238	1,159	933	819
Pigments	100	101	100	86	72
Chemicals--petroleum refining	232	197	206	141	123
Miscellaneous	39	43	32	20	12
Grand total 3/	1,582	1,579	1,497	1,180	1,026

1/ Withheld to avoid disclosing company proprietary data.

2/ Includes lead consumed in foil, collapsible tubes, annealing, galvanizing, plating, weights and ballast.

3/ Because of rounding, figures may not add to the totals shown.

Source: U.S. Bureau of Mines.

Zinc.--Zinc consumption in all sectors declined sharply during 1980 as a result of the overall economic slowdown and the pronounced decline in the automotive and construction markets. In 1981, zinc consumption continued to decline in some sectors and increased slightly in others. Total reported consumption declined 25 percent to 829,656 short tons in 1981 from 1,101,765 short tons in 1977. Galvanizing applications continue to be the largest demand sector for zinc. Increasing manufacturer and consumer awareness of corrosion's effects on product life had resulted in an increase demand for galvanized products in recent years, especially from the automotive sector. Since zinc use in galvanizing depends directly on steel demand from the construction, automotive, and durable goods sector, declines in these markets during 1980 reduced the demand for zinc. Reported consumption in galvanizing dropped about 7 percent in 1981 to 406,993 short tons from 436,998 short tons in 1977.

Diecasting applications, once the largest market for slab zinc, have decreased because of the substitution of lighter weight or less expensive materials such as plastic, aluminum, and magnesium. The automotive industry, accounting for one-half of diecast consumption, has been a prime factor in the decreasing demand for zinc die-cast products. Automakers attempting to meet mandated fuel economy requirements, increase vehicle mileage, and decrease costs have downsized vehicles, thus reducing overall weight. These factors, coupled with an overall decline in auto production during 1980, resulted in a 43-percent decline in die-casting consumption, totaling 230,572 short tons in 1981 compared with 404,691 short tons in 1977.

Brass, an alloy of zinc and copper, is the third largest use of zinc. The brass industry was depressed throughout 1980, reaching a low point in the third quarter. Reported consumption of brass in 1981 declined about 13 percent to 122,148 short tons from 141,438 in 1977.

The following table indicates the trends in zinc consumption from 1977 to 1981.

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Slab zinc: U.S. consumption, by end uses, 1977-81

(In short tons)

Item	1977	1978	1979	1980	1981
Galvanizing:					
Sheet and strip	260,173	296,177	295,226	243,328	273,871
Wire and wire rope	23,654	25,134	25,967	25,075	23,297
Tube and pipe	47,021	52,226	50,313	40,868	38,225
Fitting (for tube and pipe)	6,416	7,635	9,073	8,150	4,489
Tanks and containers	3,370	3,192	4,499	3,634	4,427
Structural shapes	29,347	36,667	37,341	36,791	21,875
Fasteners	4,289	5,334	5,504	3,515	3,566
Pole-line hardware	4,933	5,367	5,334	4,495	3,684
Fencing, wire cloth, and netting	22,455	27,554	24,163	17,661	13,427
Other and unspecified uses	35,340	41,178	41,710	34,507	20,131
Subtotal	436,998	500,464	499,130	418,026	406,993
Brass and bronze:					
Sheet, strip, and plate	77,347	77,361	70,793	41,590	45,843
Rod and wire	43,569	51,019	56,361	35,885	40,611
Tube	6,109	7,473	7,374	5,183	6,634
Casting and billets	4,493	4,880	4,006	3,095	2,040
Copper-base ingots	8,316	7,254	7,496	18,948	22,499
Other copper-base products	1,604	7,976	9,841	4,235	4,521
Subtotal	141,438	155,963	155,871	108,937	122,148
Zinc-base alloy:					
Die-casting alloy	396,550	381,364	340,307	273,399	221,992
Dies and rod alloy	614	600	75	0	0
Slush and sand-casting alloy	7,527	8,402	5,805	6,838	8,580
Subtotal	404,691	390,366	346,187	280,237	230,572
Rolled zinc	30,210	27,413	24,299	24,259	25,526
Zinc oxide	42,454	41,008	39,146	29,814	20,923
Other uses 1/	45,974	42,856	38,345	33,862	23,494
Grand total 2/	1,101,765	1,158,070	1,102,978	894,134	829,656

1/ Includes zinc used for zinc dust, wet batteries, desilverizing lead, light-metal alloys, and other miscellaneous uses.

2/ Estimated consumption of plants reporting on an annual basis only.

Source: U.S. Bureau of Mines.

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U.S. production

Lead.--Domestic production of primary lead including lead in antimonial lead from the primary refineries in 1981 was 9 percent lower than that of 1977. Primary lead production was drastically reduced during the second and third quarters of 1981 because of strikes at two major producers. At one point, work stoppages idled about 47 percent of U.S. capacity. About 80 percent of the total refined production was corroding-grade lead and the balance was in common, chemical, antimonial, and miscellaneous specification metal. Calcium-tins and other special alloys for the maintenance-free battery industry were introduced as primary lead smelter products.

The following table shows details of primary production trends.

Refined lead: U.S. production, by sources, 1977-81

(In short tons)

Item	1977	1978	1979	1980	1981 1/
From primary sources:					
Domestic ores and base bullion	536,449	552,967	584,192	560,154	510,000
Foreign ores and base bullion	68,389	70,030	50,310	43,461	40,000
Total	604,838	622,997	634,502	603,615	550,000
From secondary sources	95	1,371	3,155	2,334	2,000
Total	604,932	624,867	637,657	605,948	552,000

1/ Estimated.
Source: U.S. Bureau of Mines.

Production of lead from recycled materials decreased 25 percent in 1981 from production in 1977, reflecting a shortage of available scrap and a strong export market. The following table indicates the trends of secondary production.

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Secondary lead recovered in the United States, 1977-81

(Short tons)

Item	1977	1978	1979	1980	1981 1/
As refined metal:					
At primary plants	95	1,371	3,155	2,333	2,000
At other plants	344,069	310,124	385,102	345,090	289,625
Subtotal	334,1641	311,495	388,257	347,424	291,625
In antimonial lead:					
At primary plants	3,364	1,523	590	3	3
At other plants	419,248	450,325	416,999	338,060	283,725
Subtotal	422,612	451,848	417,589	338,063	283,728
In other alloys	78,326	84,594	77,511	59,209	49,647
Total	835,102	847,937	883,357	744,696	625,000

1/ Estimated.

Source: U.S. Bureau of Mines.

Lead metal is on the critical and strategic metal list and is stockpiled by the U.S. Government. The Federal Emergency Management Agency revised the national defense stock pile goal for lead in October 1980. The new goal was established at 1,100,000 short tons, and inventory at yearend was 601,036 short tons.

Zinc.--U.S. slab zinc production decreased substantially in 1980 from that of the previous year, as one major smelter was closed most of the year. Production decreased 25 percent to 375,288 short tons in 1980 from 450,145 short tons in 1977. Estimated production increased about 3 percent in 1981, due to high smelter operating rates acnieved in the first nine months of 1981.

Estimated secondary production of slab zinc was also down in 1981 to 38,000 short tons from 50,611 short tons in 1977. The trends in primary and secondary zinc production are indicated in the following table.

Slab zinc: U.S. production, by source locations and by types, 1977-81

(In short tons)

Item	1977	1978	1979	1980	1981
From domestic ore	355,174	294,703	281,469	255,571	258,750
From foreign ore	94,971	153,605	239,353	119,717	121,250
Total, primary	450,145	448,308	520,822	375,288	380,000
Secondary distilled 1/:					
At primary plants	29,154	26,549	44,471	14,455	16,950
At secondary plants	21,457	11,782	14,185	17,949	21,050
Total, secondary	50,611	38,331	58,658	32,404	38,000
Grand total	500,756	486,639	579,478	407,692	418,000

1/ Not including remelt.

Source: U.S. Bureau of Mines.

Zinc metal is also on the critical and strategic metal list and is stockpiled by the U.S. Government. The stockpile goal for zinc was increased from 1,312,992 tons to 1,424,999 tons in May by the Federal Emergency Management Agency. The total inventory of slab zinc in storage was 375,970 short tons at yearend.

U.S. imports

Import trends.--Imports of lead in all forms decreased from the 1977 totals and was attributed to the lack of domestic demand and strong pricing in the world markets. U.S. imports of unwrought lead and waste and scrap decreased to 114,974 short tons, valued at $88.9 million in 1981, from 268,685 short tons, valued at $155.4 million in 1977, following a low for the 5-year period, of 93,956 short tons, valued at about $90.3 million (table 7). Canada and Mexico accounted for 45.1 and 28.7 percent of imports, respectively.

Imports of wrought lead decreased to 523 short tons, valued at about $727,000, in 1981 from 1,324 short tons, valued at about $1.8 million, in 1977 (table 8). Canada supplied 47.2 percent of total imports, and Mexico accounted for 22.6 percent.

Total imports of lead accounted for 8.1 percent of reported U.S. consumption in 1981.

Imports of zinc in all forms increased to 690,461 short tons, valued at about $562.3 million in 1981, from 573,405 short tons, valued at $368.3 million in 1977, following a low for the 5-year period, of 461,951 short tons, valued at $325.6 million in 1980.

Imports of unwrought zinc and waste and scrap decreased to 455,953 short tons, valued at about $320.6 million, in 1980, from 565,628 short tons, valued at $361.5 million, in 1977 (table 9). Imports increased in 1981, to 680,996 short tons, valued at $551.9 million. Canada was the major supplier, accounting for 52.2 percent of imports.

Imports of wrought zinc increased to 9,465 short tons, valued at $10.4 million, in 1981, following a sharp decline to 4,366 short tons, valued at $3.9 million, in 1979 (table 10). Imports in 1977 were 7,777 short tons valued at $6.8 million. Canada was the major supplier, accounting for 50.4 percent of imports. Total imports of zinc accounted for 83.2 percent of reported U.S. consumption in 1981.

Imports under TSUS item 806.30.--Imports under item 806.30 are articles of metal manufactured in the United States that are exported to be advanced in value or improved in condition by any process of manufacture and returned. A complete description can be found in the TSUS under item 806.30. 1/

Imports under item 806.30 during 1977-81 totaled 33,001 short tons, valued at $27 million. Most of the item 806.30 imports consisted of unwrought lead; a very small portion in 1978 was lead alloy plates and sheet. The major sources have been Canada and Mexico. In 1981, a small portion of imports was from the United Kingdom in the form of lead powder and flakes. There were no

1/ See excerpt of TSUSA in app. A.

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zinc imports under item 806.30 during the period. The following tabulation shows imports classified under 806.30:

Year	Quantity (short tons)	Value ($1,000 dollars)	Source
1977----------	10,446	6,586	Canada, Mexico
1978----------	9,724	6,461	Canada
1979----------	7,971	7,627	Canada
1980----------	362	2,704	Canada
1981----------	4,498	3,202	Canada, United Kingdom

Imports under TSUS item 807.00.--Imports under TSUS item 807.00 are articles assembled abroad with components produced in the United States. These items were exported in condition ready for assembly without further fabrication, have not lost their physical identity in such articles by change in form, shape, or otherwise; and have not been advanced in value or improved in condition abroad except by being assembled or by operations incidental to the assembly process. A complete description can be found in the TSUS under item 807.00. 1/

Imports under item 807.00 during 1977-81 totaled 794 short tons. Over 76 percent of these items were unwrought lead alloys classified by contained weight. The remainder of imports were unwrought lead unalloyed. In 1981, the sources were Canada, the United Kingdom, West Germany, and Denmark. There were no zinc imports under item 807.00 during the period. The following tabulation shows imports classified under item 807.00:

Year	Quantity (short tons)	Source
1977----------	88	Canada
1978----------	61	Canada
1979----------	270	Canada
1980----------	313	Canada, Mexico,
1981----------	62	Canada, United Kingdom, West Germany, Denmark

Imports under Generalized System of Preferences.--Imports of most lead and zinc products have been eligible for duty-free treatment under GSP since its institution in 1976 (see duty table, "U.S. customs treatment" section for individual item GSP eligibility).

Total lead imports under GSP in 1981 amounted to 230 short tons, valued at $175,000. Imports under GSP accounted for less than 1 percent of total

1/ See excerpt of TSUSA in app. A.

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imports. Most of these items were waste and scrap and powders and flakes from Chile and Mexico.

Total zinc imports under GSP in 1981 amounted to 1,153 short tons, valued at $1.2 million. Imports under GSP accounted for less than 1 percent of total imports. In 1978, imports of zinc bars, rods, angles, shapes, and sections from Mexico amounted to 275 short tons, valued $130,000. In 1981, most of the imports under GSP were in the forms of zinc dust, powders and flakes from Mexico. A small portion was in the forms of zinc wire and pipe from Taiwan.

The following tabulation shows the trend of GSP imports of lead:

Year	Quantity	Value
	Short tons	1,000 dollars
1977	0	-
1978	0	-
1979	468	371
1980	794	724
1981	230	175

The following tabulation shows the trend of GSP imports of zinc:

Year	Quantity	Value
	Short tons	1,000 dollars
1977	1,445	1,124
1978	1,553	1,093
1979	0	-
1980	102	88
1981	1,153	1,166

The International Market

International market profile

Total world consumption of refined primary and secondary lead metal increased to 5.7 million tons in 1980 from 5.5 million tons in 1976 according to the World Bureau of Metal Statistics.

There are 12 major integrated foreign lead companies located in Canada, Mexico, West Germany, Peru, France, Italy, Sweden and Yugoslavia. Foreign companies that produce substantial quantities of lead by custom smelting and refining concentrates or bullion received from mines in various countries are located in Belgium, West Germany, the Netherlands, the United Kingdom, Japan, and Australia.

The United States is the world's largest producer and consumer of lead metal, and the U.S.S.R. is second. In 1981, the major world markets for lead were Italy, West Germany, and the United Kingdom. Lower transportation costs were a factor in high levels of U.S. exports to Canada and Mexico.

The foreign zinc industry is dominated by large vertically integrated companies. The leading producing countries of primary zinc metal are Japan, the U.S.S.R., Canada, and the United States. Since 1969, Finland, the Republic of South Africa, Vietnam, Algeria, and Turkey became producers. Of the new plants built since then, 47 percent of the capacity is in Europe, 24 percent in North and South America (mainly Canada and Mexico), 21 percent in Asia, and 8 percent in Africa. Several major U.S. companies have substantial interests in foreign zinc-mining activities in Australia, Peru, Bolivia, Canada, Mexico, and Nicaragua.

The World Bureau of Metal Statistics reported world consumption of slab zinc of 6.8 million tons in 1980 compared with 6.4 million tons in 1976. Consumption was about the same or slightly higher in Asia, Europe, Africa, Australia, South America, and centrally planned economy countries, compared with that in 1976, but consumption dropped in North America. Major consuming countries exhibiting declines were Canada, the United States, the United Kingdom, and Japan. Primary smelter production declined in 1980, mainly in Japan, Spain, and the United States.

World primary zinc smelter capacity decreased to about 8.43 million short tons per year at the end of 1980, down from about 8.52 million short tons at yearend 1979. The change reflects the closure of one U.S. smelter and the expansion of existing smelters in countries where zinc metal consumption is increasing--the Netherlands the Republic of South Africa, and the Republic of Korea—and new plants in Brazil and Portugal.

U.S. exports

In 1980, the United States was a net exporter of lead, primary attributed to the narrowed U.S./LME price differential which provided a price advantage for the U.S. product resulting in increased exports. The largest segment of outgoing shipments was in the form of unwrought pigs and bars, which increased from 8,135 short tons in 1979 to 172,512 short tons in 1980. A substantial portion of these exports went to LME warehouses in Antwerp, Rotterdam, and London. From these points, the metal was transshipped to consumers in Europe and the East bloc countries. Total unwrought lead and waste and scrap exports increased to 304,403 short tons, valued at about $216 million, in 1980 from 90,096 short tons, valued at about $26 million, in 1977 (table 3). In 1981, domestic work stoppages resulted in a drastic decline in exports, to 84,019 short tons, valued at about $38 million.

Exports of wrought lead increased to 7,186 short tons, valued at about $10 million, in 1981 from 5,155 short tons, valued at about $5 million, in 1977 (table 4). The major export markets for wrought lead were Mexico, Canada, and Belgium.

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U.S. exports of unwrought zinc and waste and scrap increased to 33,833 short tons, valued at about $19 million, in 1981, from 8,940 short tons, valued at about $4 million, in 1977 (table 5). The major markets were Belgium, the United Kingdom, and West Germany.

Exports of wrought zinc increased to 8,440 short tons, valued at about $13 million, in 1981 following a low in 1979 of 4,684 short tons, valued at $7 million. Exports in 1977 amounted to 8,864 short tons, valued at about $7 million. Canada remained the major market, accounting for 62 percent of 1981 exports.

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Appendix A

Part 2, Subpart G, Schedule 6, and Part 3, Subpart C, Schedule 6, Part 1, Subpart B, Schedule 8, and Part 1, Subpart B, Schedule 9, of the Tariff Schedules of the United States Annotated (1982) and Staged Rates of Duty

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GSP	Item	Stat. Suffix	Articles	Units of Quantity	Rates of Duty 1	Rates of Duty LDDC	Rates of Duty 2
			Subpart G. - Lead				
			Subpart G headnotes:				
			1. This subpart covers lead, its alloys, and their so-called basic shapes and forms, and also includes lead waste and scrap.				
			2. Alloys of lead: For the purposes of the tariff schedules, alloys of lead are metals in which the lead content is, by weight, less than 99.0 percent, but not less than any other metallic element. In the absence of context which requires otherwise, the term "lead", wherever used in the tariff schedules, includes alloys of lead.				
			3. For the purposes of this subpart, the following terms have the meanings indicated: (a) Plates, sheets, and strips: Products of solid rectangular cross section, in coils or cut to length, whether or not corrugated or crimped. Plates are 0.25 inch or more in thickness and over 12 inches in width; sheets are under 0.25 inch but not under 0.006 inch in thickness and over 6 inches in width; strips are under 0.25 inch but not under 0.006 inch in thickness and are not over 6 inches in width. (b) Wire: A non-tubular product of any cross-sectional configuration under 0.25 inch in maximum cross-sectional dimension, in coils. (c) Bars, rods, angles, shapes, and sections: Products which do not conform completely to the respective definitions set forth in this headnote for plates, sheets, strips, or wire and do not include any tubular products.				
			Unwrought lead:				
A	624.02		Lead bullion	.....	3.5% ad val. on the value of the lead content		10.5% ad val.
		20	Lead bullion	Lb. v			
			lead content	Lb.			
		40	Gold content	Oz. troy			
		60	Silver content	Oz. troy			
	624.03		Other	.....	3.5% ad val. on the value of the lead content 1/		10% ad val.
		30	Alloyed	Lb. v			
			lead content	Lb.			
		50	Other	Lb.			
			lead content	Lb.			
A	624.04	00	Lead waste and scrap	.....	3.2% ad val. on the value of the lead content	2.3% ad val. on the value of the lead content	11.5% ad val.
			lead content	Lb.			

1/ Duty on unwrought lead other than lead bullion temporarily reduced. See item 911.50 in part 1B, Appendix to Tariff Schedules.

Note: For explanation of the symbol "A" or "A*" in the column entitled "GSP", see general headnote 3(c).

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GSP	Item	Stat. Suffix	Articles	Units of Quantity	Rates of Duty 1	Rates of Duty LDDC	Rates of Duty 2
			Plates, sheets, and strips, all the foregoing which are wrought, of lead, whether or not cut, pressed, or stamped to nonrectangular shapes:				
			Not cut, not pressed, and not stamped to nonrectangular shapes:				
			Plates and sheets:				
			Not clad:				
A	624.10	00	Other than alloys of lead	Lb.	3.1% ad val.	2.7% ad val.	10% ad val.
			Of alloys of lead:				
A	624.12	00	Valued not over 13-1/3 cents per pound	Lb.	0.75c per lb.		6c per lb.
A	624.14	00	Valued over 13-1/3 cents per pound	Lb.	4.9% ad val.	3.9% ad val.	45% ad val.
A	624.16	00	Clad	Lb.	9.9% ad val.	6.5% ad val.	30% ad val.
			Strips:				
A	624.18	00	Valued not over 13-1/3 cents per pound	Lb.	5.3% ad val.	4.2% ad val.	47% ad val.
A	624.20	00	Valued over 13-1/3 cents per pound	Lb.	4.9% ad val.	3.9% ad val.	45% ad val.
			Cut, pressed, or stamped to nonrectangular shapes:				
A	624.22	00	Valued not over 13-1/3 cents per pound	Lb.	2.8% ad val.	2.5% ad val.	44% ad val.
A	624.24	00	Valued over 13-1/3 cents per pound	Lb.	4.9% ad val.	3.9% ad val.	45% ad val.
			Bars, rods, angles, shapes, and sections, all the foregoing which are wrought, of lead; lead wire:				
A	624.30	00	Glazier's lead and lead wire	Lb.	1.2% ad val.		10% ad val.
			Other:				
A	624.32	00	Valued not over 13-1/3 cents per pound	Lb.	9.5% ad val.	6.3% ad val.	45% ad val.
A	624.34	00	Valued over 13-1/3 cents per pound	Lb.	9.4% ad val.	6.2% ad val.	45% ad val.
			Lead powder and flakes:				
A	624.40	00	Valued not over 13-1/3 cents per pound	Lb.	11.9% ad val.		45% ad val.
A	624.42	00	Valued over 13-1/3 cents per pound	Lb.	11.25% ad val.		45% ad val.
			Pipes and tubes and blanks therefor, pipe and tube fittings, all the foregoing of lead:				
A	624.50	00	Of lead other than alloys of lead	Lb.	2.4% ad val.	2% ad val.	10% ad val.
			Of alloys of lead:				
A	624.52	00	Valued not over 13-1/3 cents per pound	Lb.	5.3% ad val.	4.2% ad val.	44% ad val.
A	624.54	00	Valued over 13-1/3 cents per pound	Lb.	4.9% ad val.	3.9% ad val.	45% ad val.

Subpart H. - Zinc

Subpart H headnotes:

1. This subpart covers zinc, its alloys, and their basic shapes and forms, and also includes zinc waste and scrap.

Note: For explanation of the symbol "A" or "A*" in the column entitled "GSP", see general headnote 3(c).

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GSP	Item	Stat. Suffix	Articles	Units of Quantity	Rates of Duty 1	Rates of Duty LDDC	Rates of Duty 2
			2. Alloys of zinc: For the purposes of the tariff schedules, alloys of zinc are metals in which zinc predominates by weight over each of the other metal components, and which contain one or more of the following elements in the quantity by weight, respectively indicated: over 1.8 percent of any one or more of the metals lead, cadmium, and iron, or over 0.5 percent of aluminum, or over 1.0 percent of copper, or over 0.08 percent of titanium, or over 0.1 percent of any other metallic element. In the absence of context which requires otherwise, the term "zinc", wherever used in the tariff schedules, includes alloys of zinc. 3. For the purposes of this subpart, the following terms have the meanings indicated: (a) Plates, sheets, and strips: Products of solid rectangular cross section, in coils or cut to length, whether or not corrugated or crimped. Plates are 0.375 inch or more in thickness and over 12 inches in width; sheets and strips are under 0.375 inch but not under 0.006 inch in thickness. (b) Bars: Products of solid rectangular, hexagonal, or octagonal cross section, in coils or cut to length, which if rectangular are 0.375 inch or more in thickness but not over 12 inches in width, and which if hexagonal or octagonal are 0.375 inch or more for the perpendicular distance between opposite faces. (c) Rods: Products of solid round cross section which if 0.375 inch or more in diameter are in coils or cut to length, and which if under 0.375 inch in diameter are in straight lengths. (d) Wire: A product of solid round cross section under 0.375 inch in diameter, in coils. (e) Angles, shapes, and sections: Products which do not conform completely to the respective definitions set forth in this headnote for plates, sheets, strips, bars, rods, or wire and do not include any tubular products.				
			Unwrought zinc:				
626.02	00		Other than alloys of zinc	Lb	1.8% ad val.	1.5% ad val.	1.75c per lb.
626.04	00		Alloys of zinc	Lb	19% ad val.		45% ad val.
626.10	00		Zinc waste and scrap	Lb	4% ad val. 1/	2.1% ad val.	11% ad val.

1/ Duty temporarily suspended. See item 911.03 in part 1B, Appendix to Tariff Schedules.

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GSP	Item	Stat. Suffix	Articles	Units of Quantity	Rates of Duty		
					1	LDDC	2
			Plates, sheets, and strip, all the foregoing which are wrought, of zinc, whether or not cut, pressed, or stamped to nonrectangular shapes:				
			Not clad:				
			Other than alloys of zinc:				
			Not cut, not pressed, and not stamped to nonrectangular shapes:				
A	626.15	00	Rolled in one direction only.....	Lb.....	8.1% ad val.	5.7% ad val.	45% ad val.
			Rolled and cross rolled:				
A	626.17	00	Not coated or plated with metal.....	Lb.....	0.9% ad val.		4% ad val.
A	626.18	00	Coated or plated with metal....	Lb.....	5.3% ad val.	4.2% ad val.	24% ad val.
A	626.20	00	Cut, stamped, or pressed to non-rectangular shapes.....	Lb.....	8.1% ad val.	5.7% ad val.	45% ad val.
A	626.22	00	Alloys of zinc.....	Lb.....	8.9% ad val.	5.7% ad val.	45% ad val.
A	626.24	00	Clad.....	Lb.....	9.9% ad val..	6.5% ad val.	30% ad val.
			Zinc wire:				
A	626.30	00	Not coated or plated with metal.....	Lb.....	5.3% ad val.	4.2% ad val.	25% ad val.
A	626.31	00	Coated or plated with metal.....	Lb.....	5.3% ad val.	4.2% ad val.	25.5% ad val.
A	626.35	00	Bars, rods, angles, shapes and sections, all the foregoing which are wrought, of zinc.....	Lb.....	8.1% ad val.	5.7% ad val.	45% ad val.
			Zinc powders and flakes:				
A	626.40	00	Dust.....	Lb.....	0.3c per lb.		1.75c per lb.
A	626.42	00	Other.....	Lb.....	9.5% ad val.		45% ad val.
A	626.45	00	Pipes and tubes and blanks therefor, pipe and tube fittings, all the foregoing of zinc.....	Lb.....	7.4% ad val.	3.8% ad val.	45% ad val.

Subpart J. - Beryllium, Columbium, Germanium, Hafnium, Indium, Magnesium, Molybdenum, Rhenium, Tantalum, Titanium, Tungsten, Uranium, and Zirconium

Subpart J headnotes:

1. This subpart covers the metals beryllium, columbium, germanium, hafnium, indium, magnesium, molybdenum, rhenium, tantalum, titanium, tungsten, uranium, and zirconium, and their alloys, unwrought and wrought, and also includes the waste and scrap of these metals.

Note: For explanation of the symbol "A" or "A*" in the column entitled "GSP", see general headnote 3(c).

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GSP	Item	Stat. Suffix	Articles	Units of Quantity	Rates of Duty 1	Rates of Duty LDDC	Rates of Duty 2
			2. Alloys: For the purposes of the tariff schedules, alloys of each of the base metals provided for in this subpart are metals in which the concent of the respective base metal is, by weight, less than 99.0 percent, but not less than any other metallic element. In the absence of context which requires otherwise, a reference to one of the base metals by name, wherever used in the tariff schedules, includes alloys or such base metal.				
			Subpart J statistical headnote:				
			1. For the purposes of this subpart, the term "wire" means products of solid cross section 0.02 inch or less in diameter, in coils or cut to length.				
			Beryllium, unwrought and wrought; beryllium waste and scrap:				
A	628.05	00	Unwrought, and waste and scrap	Lb	8.5% ad val.		25% ad val.
A	628.10	00	Wrought	Lb	9% ad val.		45% ad val.
			Columbium, unwrought and wrought; columbium waste and scrap:				
A	628.15	00	Unwrought, other than alloys; and waste and scrap	Lb	4.5% ad val.	3.7% ad val.	25% ad val.
	628.17	00	Unwrought, alloys	Lb	6.5% ad val.	4.9% ad val.	25% ad val.
A	628.20	00	Wrought	Lb	7.7% ad val.	5.5% ad val.	45% ad val.
			Germanium, unwrought and wrought; germanium waste and scrap:				
A	628.25	00	Unwrought, and waste and scrap	Lb	4.5% ad val.	3.7% ad val.	25% ad val.
A	628.30	00	Wrought	Lb	7.7% ad val.	5.5% ad val.	45% ad val.
			Hafnium, unwrought and wrought; hafnium waste and scrap:				
A	628.35	00	Unwrought, and waste and scrap	Lb	3.1% ad val.	Free	25% ad val.
A	628.40	00	Wrought	Lb	9% ad val.		45% ad val.
			Indium, unwrought and wrought; indium waste and scrap:				
A	628.45	00	Unwrought, and waste and scrap	Oz. troy	1.4% ad val.	Free	25% ad val.
A	628.50	00	Wrought	Oz. troy	7% ad val.	3.6% ad val.	45% ad val.

Note: For explanation of the symbol "A" or "A*" in the column entitled "GSP", see general headnote 3(c).

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GSP	Item	Stat. Suffix	Articles	Units of Quantity	Rates of Duty 1	Rates of Duty LDDC	Rates of Duty 2
			Bale ties, of iron or steel, with or without buckles or fastenings and whether or not coated with paint or other substance:				
			Made from wire:				
	642.90	00	Single loop ties made of round wire over 0.055 but not over 0.082 inch in diameter, and 7.5 or more but not over 10.5 feet in length	Lb.	Free		Free
	642.91	00	Other	Lb.	8.1% ad val.	5.7% ad val.	45% ad val.
A	642.93	00	Made from strip	Lb.	0.02c per lb.		0.25c per lb.
			Millineers' wire and other wire covered with textile or other material not wholly of metal:				
	642.96	00	Galvanized wire wholly of round iron or steel wire measuring not over 0.20 inch and not under 0.075 inch in diameter, if covered with plastics	Lb.	0.9% ad val.		2% ad val.
	642.97	00	Other	Lb.	8% ad val.	5.3% ad val.	35% ad val.
			Subpart C. - Metal Leaf and Foil; Metallics				
			Subpart C statistical headnote:				
			1. For the purposes of this subpart, the term "beryllium copper" refers to an alloy of copper as defined by the Tariff Schedules which contains by weight not less than 0.02 percent but less than 3 percent of beryllium with or without small quantities of other elements.				
			Base metal foil (whether or not embossed, cut to shape, perforated, etched, coated, printed, colored, decorated, or backed with paper or equivalent backing) not over 0.006 inch in thickness (excluding any coating or backing):				
			Not backed and not cut to shape:				
A	644.02		Copper foil		1.5% ad val.	1% ad val.	6.5% ad val.
			Alloyed:				
		10	Beryllium copper	Lb.			
		30	Other	Lb.			
		40	Other	Lb.			
			Aluminum foil:				
A	644.06	00	Etched capacitor foil	Lb.	7.3% ad val.	5.3% ad val.	40% ad val.
			Other:				
			Not over 0.00035 inch in thickness:				
A	644.08	00	Valued not over 55 cents per pound	Lb.	19.1% ad val.	9.8% ad val.	61.5% ad val.
A	644.09	00	Valued over 55 cents per pound	Lb.	8.4% ad val.	5.8% ad val.	40% ad val.
			Over 0.00035 inch in thickness:				
A	644.11	00	Valued not over 55 cents per pound	Lb.	8.4% ad val.	5.8% ad val.	47.5% ad val.
A	644.12	00	Valued over 55 cents per pound	Lb.	7.3% ad val.	5.3% ad val.	40% ad val.

Note: For explanation of the symbol "A" or "A*" in the column entitled "GSP", see general headnote 3(c).

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GSP	Item	Stat. Suffix	Articles	Units of Quantity	Rates of Duty 1	Rates of Duty LDDC	Rates of Duty 2
			Base metal foil (whether or not embossed, cut to shape, perforated, etched, etc.) (con.):				
			Not backed and not cut to shape (con.):				
A	644.15	00	Tin foil	Lb.	13.6% ad val.	7% ad val.	35% ad val.
			Lead foil:				
A	644.17	00	Valued not over 13-1/3 cents per pound	Lb.	6.1% ad val.	4.7% ad val.	28% ad val.
A	644.18	00	Valued over 13-1/3 cents per pound	Lb.	4.9% ad val.	3.9% ad val.	45% ad val.
A	644.20	00	Zinc foil	Lb.	7.4% ad val.	3.8% ad val.	45% ad val.
A	644.22	00	Other foil	Lb.	7% ad val.	3.6% ad val.	45% ad val.
			Cut to shape, but not backed:				
A	644.24	00	Copper foil	Lb.	8.8% ad val.	6% ad val.	47% ad val.
A	644.26	00	Aluminum foil	Lb.	8.1% ad val.	5.7% ad val.	45% ad val.
A	644.28	00	Lead foil	Lb.	4.3% ad val.	2.2% ad val.	45% ad val.
A	644.30	00	Zinc foil	Lb.	8.1% ad val.	5.7% ad val.	45% ad val.
A	644.32	00	Other foil	Lb.	7.7% ad val.	5.5% ad val.	45% ad val.
			Backed, whether or not cut to shape:				
			Covered or decorated with a character, design, fancy effect, or pattern:				
A	644.36	00	Copper foil	Lb.	4% ad val.	3.3% ad val.	21% ad val.
A	644.38	00	Other foil	Lb.	4.5% ad val.	3.7% ad val.	22.5% ad val.
			Other:				
A	644.40	00	Copper foil	Lb.	3.1% ad val.	Free	24.5% ad val.
A	644.42	00	Other foil	Lb.	2.9% ad val.	Free	23% ad val.
			Precious metal leaf, whether unmounted or mounted on paper or equivalent backing:				
			Gold leaf:				
			Unmounted:				
A	644.46	00	Leaves not over 11.40 square inches in area	Leaf	3.1% ad val.		8% ad val.
A	644.48	00	Leaves over 11.40 square inches in area	Sq. in.	40¢ for each 1,140 sq. in.	38.5¢ for each 1,140 sq. in.	82.5¢ for each 1,140 sq. in.
A	644.52	00	Mounted	Sq. in.	10.1% ad val.	5.2% ad val.	26% ad val.
A	644.56	00	Silver leaf	Leaf	2.5¢ per 100 leaves		5¢ per 100 leaves
A	644.60	00	Platinum leaf	Sq. in.	15.6% ad val.	8.2% ad val.	65% ad val.
			Base metal, in leaf:				
			Aluminum, in leaf:				
			Powder or flakes, in leaf:				
A	644.64	00	Leaves not over 30.25 square inches in area	Leaf	5.3% ad val.	2.7% ad val.	13.5% ad val.
A	644.68	00	Leaves over 30.25 square inches in area	Sq. in.	4.7% ad val.	3.8% ad val.	104% ad val.
			Other:				
A	644.72	00	Leaves not over 30.25 square inches in area	Leaf	1.4¢ per 100 leaves		6¢ per 100 leaves
A	644.76	00	Leaves over 30.25 square inches in area	Sq. in.	1.5¢ for each 3,025 sq. in.		6¢ for each 3,025 sq. in.

Note: For explanation of the symbol "A" or "A*" in the column entitled "GSP", see general headnote 3(c).

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GSP	Item	Stat. Suffix	Articles	Units of Quantity	Rates of Duty 1	Rates of Duty LDDC	Rates of Duty 2
			Base metal, in leaf (con.):				
			Copper, in leaf:				
			Powder or flakes, in leaf:				
A	644.80	00	Leaves not over 30.25 square inches in area	Leaf	4.5% ad val.	3.7% ad val.	10% ad val.
A	644.84	00	Leaves over 30.25 square inches in area	Sq. in.	6.4% ad val.	4.8% ad val.	15% ad val.
			Other:				
A	644.88	00	Leaves not over 30.25 square inches in area	Leaf	0.9% ad val.		3% ad val.
A	644.92	00	Leaves over 30.25 square inches in area	Sq. in.	1.5% ad val.		6% ad val.
A	644.95	00	Embossing and stamping materials comprised of metallic powder or flakes, or pigments, mounted on paper or similar backing, and releasable from the backing by means of heat and pressure	Sq. in.	4.7% ad val.		20% ad val.
A	644.98	00	Metallic flitters	Lb	2% ad val.	1.8% ad val.	4% ad val.
			Subpart D. - Nails, Screws, Bolts, and Other Fasteners; Locks; Builders' Hardware; Furniture, Luggage, and Saddlery Hardware				
			Subpart D headnote:				
			1. The provisions of this subpart do not cover articles coated or plated with precious metals unless such articles are specifically included therein.				
			Thumb tacks:				
A	646.02	00	Of two or more pieces of iron or steel, whether or not having heads coated or covered with plastics or other material	Lb	1.4% ad val.		4% ad val.
A	646.04	00	Of copper	Lb	3.2% ad val.		45% ad val.
A	646.06	00	Other	Lb	0.45c per lb.		0.9c per lb.
			Drive pins, studs, and other fasteners, all the foregoing, whether threaded or not threaded, suitable for use in powder-actuated hand tools:				
	646.15	00	Not threaded	Lb	Free		0.7c per lb.
A	646.17	00	Threaded	Lb	6.5% ad val.	4.9% ad val.	45% ad val.
A	646.20	00	Staples in strip form	Lb	0.9% ad val.		4% ad val.
A	646.22	00	Corrugated fasteners, glaziers' points, hook nails, and ring nails	Lb	8.1% ad val.	5.7% ad val.	45% ad val.

Note: For explanation of the symbol "A" or "A*" in the column entitled "GSP", see general headnote 3(c).

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Item	Stat. Suf-fix	Articles	Units of Quantity	Rates of Duty	
				1	2
		Subpart B. - Articles Advanced or Improved Abroad			
		Subpart B headnotes:			
		1. This subpart shall not apply to any article exported — (a) from continuous customs custody with remission, abatement, or refund of duty; (b) with benefit of drawback; (c) to comply with any law of the United States or regulation of any Federal agency requiring exportation; or (d) after manufacture or production in the United States under item 864.05 of this schedule.			
		2. Articles repaired, altered, processed, or otherwise changed in condition abroad.—The following provisions apply only to items 806.20 and 806.30: (a) The value of repairs, alterations, processing, or other change in condition outside the United States shall be — (i) the cost to the importer of such change; or (ii) if no charge is made, the value of such change, as set out in the invoice and entry papers; except that, if the appraiser concludes that the amount so set out does not represent a reasonable cost or value, then the value of the change shall be determined in accordance with section 402 of this Act. (b) No appraisement of the imported article in its changed condition shall be required unless necessary to a determination of the rate or rates of duty applicable to such article. (c) The duty upon the value of the change in condition shall be at the rate which would apply to the article itself, as an entirety without constructive separation of its components, in its condition as imported if it were not within the purview of this subpart. If the article, as returned to the United States, is subject to a specific or compound rate of duty, such rate shall be converted to the ad valorem rate which when applied to the full value of such article determined in accordance with section 402 of this Act would provide the same amount of duties as the specific or compound rate. In order to compute the duties due, the ad valorem rate so obtained shall be applied to the value of the change in condition made outside the United States.			

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Item	Stat. Suf-fix	Articles	Units of Quantity	Rates of Duty	
				1	2
		3. Articles assembled abroad with components produced in the United States.--The following provisions apply only to item 807.00: (a) The value of the products of the United States assembled into the imported article shall be -- (i) the cost of such products at the time of the last purchase; or (ii) if no charge is made, the value of such products at the time of the shipment for exportation, as set out in the invoice and entry papers; except that, if the appraiser concludes that the amount so set out does not represent a reasonable cost or value, then the value of such products shall be determined in accordance with section 402 of this Act. (b) The duty on the imported article shall be at the rate which would apply to the imported article itself, as an entirety without constructive separation of its components, in its condition as imported if it were not within the purview of this subpart. If the imported article is subject to a specific or compound rate of duty, the total duties shall be reduced in such proportion as the cost or value of such products of the United States bears to the full value of the imported article. 4. No imported article shall be accorded partial exemption from duty under more than one item in this subpart. Subpart B statistical headnotes: 1. For statistically reporting the articles provided for in this subpart the rate of duty for which is derived from a provision elsewhere in these schedules, the citation shall be the 7-digit number provided in this subpart followed by the reporting number of the provision from which such rate is derived. The unit of quantity reported hereunder for such articles shall be the same as the unit of quantity for the provision from which the rate was derived. For example, 10 new automotive compression-ignition engines exported for repairs or alterations and returned to the United States should be entered under item 806.2020 followed by 660.4220, with the quantity being shown as 10 and the value as dutiable value.			

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Item	Stat. Suf-fix	Articles	Units of Quantity	Rates of Duty	
				1	2
		2. For articles admitted under item 806.3000 or 807.0000 two values shall be reported--the first immediately following the first 7-digit number of the statistical citation (i.e., 806.3000 or 807.0000) and the second immediately following the reporting number of the provision in schedules 1-7 from which the rate of duty is derived, as follows: (a) For item 806.3000-- (i) the total value of the article less the value of the foreign processing, and (ii) the dutiable value, i.e., the value of the foreign processing, respectively; and (b) For item 807.0000-- (i) the value of the U.S. fabricated components, and (ii) the dutiable value, i.e., the total value of the articles less the value of the U.S. fabricated components, respectively.			
805.00	00	Photographic films and dry plates manufactured in the United States (except motion-picture films to be used for commercial purposes) and exposed abroad, whether developed or not.....	No.....	Free	Free
		Articles returned to the United States after having been exported to be advanced in value or improved in condition by any process of manufacture or other means:			
806.20	1/	Articles exported for repairs or alterations.....	1/	A duty upon the value of the repairs or alterations (see headnote 2 of this subpart)	A duty upon the value of the repairs or alterations (see headnote 2 of this subpart)
	20	Internal combustion engines...dutiable value..	1/		
	40	Other.....dutiable value..	1/		

1/ See subpart B statistical headnote 1.

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Item	Stat. Suf-fix	Articles	Units of Quantity	Rates of Duty 1	Rates of Duty 2
		Articles returned to the United States after having been exported, etc. (con.):			
806.30	00 1/	Any article of metal (except precious metal) manufactured in the United States or subjected to a process of manufacture in the United States, if exported for further processing, and if the exported article as processed outside the United States, or the article which results from the processing outside the United States, is returned to the United States for further processing.....	1/ 2/	A duty upon the value of such processing outside the United States (see headnote 2 of this subpart)	A duty upon the value of such processing outside the United States (see headnote 2 of this subpart)
807.00	00 1/	Articles assembled abroad in whole or in part of fabricated components, the product of the United States, which (a) were exported in condition ready for assembly without further fabrication, (b) have not lost their physical identity in such articles by change in form, shape, or otherwise, and (c) have not been advanced in value or improved in condition abroad except by being assembled and except by operations incidental to the assembly process such as cleaning, lubricating, and painting.....	1/ 2/	A duty upon the full value of the imported article, less the cost or value of such products of the United States (see headnote 3 of this subpart)	A duty upon the full value of the imported article, less the cost or value of such products of the United States (see headnote 3 of this subpart)

1/ See subpart B statistical headnote 1.
2/ See subpart B statistical headnote 2.

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Item	Stat. Suf-fix	Articles	Units of Quantity	Rates of Duty 1	Rates of Duty 2	Effective Period
		3. (a) Items 911.20, 911.21, 911.13, 911.14, 911.15, and 911.16 shall not apply when the market price of copper is under 32 cents per pound. (b) For purposes of subparagraph (a), the market price of copper has the meaning assigned to it by headnote 3(b) of the headnotes of schedule 6, part 2, subpart C. (c) For purposes of subparagraph (a), the market price of copper shall be considered to be under 32 cents per pound only on and after the 20th day after the date of a report by the United States International Trade Commission to the Secretary of the Treasury that it has determined that the market price has been under 32 cents per pound for one calendar month; after any such report, the market price shall be considered to not being under 32 cents per pound only on and after the 20th day after the date of a report by the Commission to the Secretary that it has determined that the market price has been 32 cents or more per pound for one calendar month. (d) Determinations by the Commission under this headnote shall be made in the manner prescribed by headnote 3(c) of schedule 6, part 2, subpart C.				
		4. For so long as items 903.10 and 903.11 are in effect, headnotes 3, 4, and 5 of subpart C of part 1 of schedule 3 shall be suspended (except insofar as they relate to hair of the camel) and in lieu thereof-- (a) for purposes of item 307.40-- (i) the classification provisions for wool not finer than 46s shall apply to any package of wool containing not over 10 percent by weight of wool finer than 46s but not containing wool finer than 48s; and (ii) the citation for imports classifiable under item 307.40 shall be such item number followed by the item number for the part of the contents of the package which determines the rate of duty; and (b) for purposes of item 903.11, a tolerance of not more than 10 percent of wools not finer than 48s may be allowed in each bale or package of wools imported as not finer than 46s. Subpart B statistical headnote: 1. For the purposes of statistical reporting of any item for which a unit of quantity (including X) appears in this subpart no additional reporting number (from schedules 1-7) is to be furnished.				
903.45	1/	Water chestnuts or bamboo shoots, frozen (provided for in item 137.84 or 138.40, part 8A, schedule 1).....	1/	Free	Free	On or before 6/30/83
903.50	1/	Water chestnuts (provided for in item 141.70, part 8C, schedule 1).....	1/	Free	Free	On or before 6/30/83
903.55	1/	Bamboo shoots in airtight containers (provided for in item 141.78, part 8C, schedule 1).....	1/	Free	Free	On or before 6/30/83

1/ See Appendix statistical headnote 1.

Note: The shaded area indicates that the effective period for special tariff treatment has expired.

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Item	Stat. Suffix	Articles	Units of Quantity	Rates of Duty 1	Rates of Duty 2	Effective Period
902.80	1/	Mixtures of washed or macerated hot red peppers and salt (provided for in item 141.77 or 141.88, part 8C, schedule 1).....	1/	Free	No change	On or before 6/30/81
		Feathers and downs, whether or not on the skin, crude, sorted (including feathers simply strung for convenience in handling or transportation), treated, or both sorted and treated, but not otherwise processed (provided for in item 186.15, part 15D, schedule 1):				
903.70	1/	Meeting both test methods 4 and 10.1 of Federal Standard 148a promulgated by the General Services Administration.....	1/	Free	No change	On or before 6/30/84
903.80	1/	Other.....	1/	Free	Free	On or before 6/30/84
904.00	1/	Wood excelsior, including excelsior pads and wrappings (provided for in item 200.25, part 1A, schedule 2).....	1/	Free	No change	On or before 6/30/81
		Wool (provided for in part 1C, schedule 3):				
905.10	1/	All wool provided for in items 306.00 through 306.24.....	1/	Free	Free	On or before 6/30/85
905.11	1/	Wool not finer than 46s provided for in items 306.30 through 306.34.....	1/	Free	Free	On or before 6/30/85
905.40	1/	Textile fabrics of manmade fibers, coated or filled or laminated with natural rubber, for use in the manufacture of skirts for hovercraft (provided for in item 359.50, part 4C, schedule 3).....	1/	Free	No change	On on before 6/30/83
907.05	1/	Bis(4-aminobenzoate)-1,3-propanediol (trimethylene glycol di-p-aminobenzoate) (however provided for in items 402.36 through 406.63, part 1B, schedule 4).....	1/	Free	No change	On or before 6/30/83
907.10	1/	Cyclic organic chemical products in any physical form having a benzenoid, quinoid, or modified benzenoid structure (however provided for in items 402.36 through 406.63, part 1B, schedule 4) to be used in the manufacture of photographic color couplers.....	1/	Free	No change	On or before 6/30/82
907.11	1/	2-Methyl-4-chlorophenol (however provided for in items 402.36 through 406.63, part 1B, schedule 4).....	1/	Free	No change	On or before 6/30/81
907.12	1/	Photographic color couplers (provided for in item 408.41, part 1C, schedule 4).....	1/	Free	No change	On or before 6/30/82
907.20	1/	Doxorubicin hydrochloride (provided for in item 411.76, part 1, or in item 437.32 or 438.02, part 3, schedule 4, depending on source).....	1/	Free	No change	On or before 6/30/82

1/ See Appendix statistical headnote 1.

Note: The shaded area indicates that the effective period for special tariff treatment has expired.

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Item	Stat. Suf-fix	Articles	Units of Quantity	Rates of Duty 1	Rates of Duty 2	Effective Period
907.40	1/	Boric acid (provided for in item 416.10, part 2B, schedule 4).....	1/	Free	No change	On or before 6/30/79
907.60	00	Carboxymethyl cellulose sodium salts of a purity not exceeding 98 percent nor less than 95 percent by weight on a dry weight basis (provided for in item 465.87, part 8A, schedule 4).....	lb.....	Free	No change	On or before 6/30/75
907.75	1/	Intravenous fat emulsion (provided for in item 440.00, part 3C, schedule 4).....	1/	Free	Free	On or before 6/30/80
907.90	1/	Levulose (provided for in item 493.66, part 13B, schedule 4).....	1/	Free	No change	On or before 12/31/81
909.01	1/	Graphite, crude and refined, natural (provided for in item 317.21, or 317.24, part 1E, schedule 5).....	1/	Free	No change	On or before 6/30/81
909.10	1/	Mineral wool, in bulk, or in batts, blankets, or similar forms, whether or not lined, backed, or supported with paper, paperboard, or similar materials (provided for in item 522.81, part 1J, schedule 5).....	1/	Free	No change	On or before 6/30/79
909.20	1/	Ceramic insulators having an alumina oxide content of not less than 96%, if used in spark plugs (provided for in item 535.14, part 2D, schedule 5).....	1/	4% ad val.	No change	On or before 6/30/81
909.30	1/	Glass fibers in bulk; glass fibers in the form of mats, batts, blankets, felts, pads, casings, and boards, all the foregoing, of a density not over 4 pounds per cubic foot, whether or not coated, impregnated, or bonded with glue, plastics, or other substances, or lined, backed, or supported with paper, paperboard, fabrics or similar materials, or with metal mesh or foil (provided for in item 540.71, part 3A, schedule 5).....	1/	Free	No change	On or before 6/30/79

1/ See Appendix statistical headnote 1.

Note: The shaded area indicates that the effective period for special tariff treatment has expired.

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Item	Stat. Suf-fix	Articles	Units of Quantity	Rates of Duty 1	Rates of Duty 2	Effective Period
911.00	1/	Zinc-bearing ores (provided for in item 602.20, part 1, schedule 6)	1/	Free on zinc content	No change	On or before 6/30/84
911.01	1/	Zinc dross and zinc skimmings (provided for in item 603.30, part 1, schedule 6)	1/	Free	No change	On or before 6/30/84
911.02	1/	Zinc-bearing materials (provided for in items 603.49, 603.50, 603.54, and 603.55, part 1, schedule 6)	1/	Free on zinc content	No change	On or before 6/30/84
911.03	1/	Zinc waste and scrap (provided for in item 626.10, part 2, schedule 6)	1/	Free	No change	On or before 6/30/84

Item	Stat. Suf-fix	Articles	Units of Quantity	Rates of Duty 1-a	Rates of Duty 1-b	Rates of Duty 2	Effective Period
		Metal waste and scrap (provided for in part 2, schedule 6), except lead, zinc, and tungsten waste and scrap; unwrought metal (except copper, lead, zinc, and tungsten) in the form of pigs, ingots, or billets (a) which are defective or damaged, or have been produced from melted down metal waste and scrap for convenience in handling and transportation without sweetening, alloying, fluxing, or deliberate purifying, and (b) which cannot be commercially used without remanufacture; relaying or rerolling rails; and articles of metal (except articles of lead, of zinc, or of tungsten, and not including metal-bearing materials provided for in schedule 4 or in part 1 of schedule 6 and not including unwrought metal provided for in part 2 of schedule 6) to be used in remanufacture by melting, or to be processed by shredding, shearing, compacting, or similar processing which renders them fit only for the recovery of the metal content:					
911.10	1/	Copper waste and scrap	1/	Free	No change	No change	On or before 6/30/84
911.11	00 2/	Articles of copper	Lb.	Free	No change	No change	On or before 6/30/84
911.12		Other		Free	Free	Free	On or before 6/30/84
	20 1/	Metal waste and scrap (provided for in part 2, schedule 6)	1/				
	40 1/	Pigs, ingots, or billets	1/				
	60 2/	Relaying or rerolling rails	Lb.				
	80 2/	Articles of metal	Lb.				

1/ See Appendix statistical headnote 1.
2/ See subpart B statistical headnote 1.

Note: The shaded area indicates that the effective period for special tariff treatment has expired.

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APPENDIX TO THE TARIFF SCHEDULES
Part 1. - Temporary Legislation

9 - 1 - B
911.13 - 912.06

Item	Stat. Suffix	Articles	Units of Quantity	Rates of Duty 1	Rates of Duty 2	Effective Period
[illegible]	1/	Copper leaching ores and materials (provided for in items 602.30 or 603.50, part 1, schedule 6).....	1/	Free of duty imposed on copper content under item 602.30 or 603.50	No change	On or before 6/30/75

Item	Stat. Suffix	Articles	Units of Quantity	Rates of Duty 1-a	Rates of Duty 1-b	Rates of Duty 2	Effective Period
[illegible]	1/	Cement copper and copper precipitates (provided for in item 613.02, part 2C, schedule 6).....	1/	Free	No change	No change	On or before 6/30/75
[illegible]	1/	Blank copper, blister copper, anode copper (provided for in item 613.04, part 2C, schedule 6).....	1/	Free	No change	No change	On or before 6/30/75
[illegible]	1/	Other unwrought copper (provided for in item 613.06, part 2C, schedule 6).....	1/	Free	No change	No change	On or before 6/30/75

Item	Stat. Suffix	Articles	Units of Quantity	Rates of Duty 1	Rates of Duty 2	Effective Period
911.25	1/	Synthetic rutile (provided for in item 603.70, part 1, schedule 6).....	1/	Free	No change	On or before 6/30/82
911.29	1/	Chipper knife steel (provided for in item 606.93, part 2B, schedule 6).....	1/	4.6% ad val.	No change	On or before 9/30/82
[illegible]	1/	Flatrolled, flume products of any cross-sectional configuration, not over 0.703 inch in maximum cross-sectional dimension and containing not over 0.25 percent by weight of carbon (provided for in item 606.96, part 2B, schedule 6).....	1/	5% ad val.	No change	On or before 12/31/81
911.50	1/	Unwrought lead other than lead bullion (provided for in item 624.03, part 2G, schedule 6).....	1/	3% ad val. on the value of the lead content, but not less than 1.0625¢ per lb. on the lead content	No change	On or before 6/30/83
911.90	1/	Unwrought alloys of cobalt containing, by weight, 76% or more but less than 99% cobalt (provided for in item 632.88, part 2K, schedule 6).....	1/	Free	No change	On or before 6/30/82
912.05	1/	Generator lighting sets for bicycles, and parts thereof (provided for in item 653.39, part 3F, schedule 6)...	1/	Free	No change	On or before 6/30/83
912.06	1/	Yankee dryer cylinders (provided for in item 666.06, part 4D, schedule 6).....	1/	Free	No change	On or before 12/31/81

1/ See Appendix statistical headnote 1.

Note: The shaded area indicates that the effective period for special tariff treatment has expired.

49 BEST DOCUMENT AVAILABLE

Item	Stat. Suf-fix	Articles	Units of Quantity	Rates of Duty 1	Rates of Duty 2	Effective Period
912.10	1/	Caliper brakes, drum brakes, coaster brakes, two-speed hubs with internal gear-changing mechanisms, three-speed hubs incorporating coaster brakes, three-speed hubs not incorporating coaster brakes, click twist grips, click stick levers, multiple free wheel sprockets, cotterless type crank sets, frame lugs, parts of all the foregoing, and parts of bicycles consisting of sets of steel tubing cut to exact length and each set having the number of tubes needed for the assembly (with other parts) into the frame and fork of one bicycle (provided for in items 732.35, 732.38, 732.41, and 732.42, part 5C, schedule 7).....	1/	Free	No change	On or before 6/30/83
912.12	1/	[illegible] (provided for in item 790.70, part 12A, schedule 7).....	1/	Free	No change	On or before 6/30/83
912.13	1/	Power-driven flat knitting machines over 20 inches in width (provided for in item 670.19 or 670.20, part 4E, schedule 6).....	1/	Free	No change	On or before 6/30/83
912.14	1/	Warp knitting machines (provided for in item 670.20, part 4E, schedule 6).....	1/	Free	No change	On or before 6/30/83

1/ See Appendix statistical headnote 1.

Note: The shaded area indicates that the effective period for special tariff treatment has expired.

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Lead and Zinc: Pre-MTN rate and staged rate modifications, by TSUS items, 1980-87.

TSUS item	Prior rate	Rates of duty 1/, effective with respect to articles entered, or withdrawn from warehouse, for consumption on and after --							
		January 1, 1980 except as noted	January 1, 1981	January 1, 1982	January 1, 1983	January 1, 1984	January 1, 1985	January 1, 1986	January 1, 1987
624.02	1.0625c per lb. on 99.6% of the lead content	3.5% on the value of the lead content	3.5% on the value of the lead content	3.5% on the value of the lead content	3.5% on the value of the lead content	3.5% on the value of the lead content	3.5% on the value of the lead content	3.5% on the value of the lead content	3.5% on the value of the lead content
624.03	1.0625c per lb. on lead content	3.5% on the value of the lead content	3.5% on the value of the lead content	3.5% on the value of the lead content	3.5% on the value of the lead content	3.5% on the value of the lead content	3.5% on the value of the lead content	3.5% on the value of the lead content	3.5% on the value of the lead content
624.04	1.0625c per lb. on 99.6% of the lead content	3.6% on the value of the lead content	3.4% on the value of the lead content	3.2% on the value of the lead content	3% on the value of the lead content	2.8% on the value of the lead content	2.7% on the value of the lead content	2.5% on the value of the lead content	2.3% on the value of the lead content
624.10	1.3125c per lb.	3.2%	3.2%	3.1%	3%	2.9%	2.9%	2.8%	2.7%
624.14	5.5% ad val.	5.3%	5.1%	4.9%	4.7%	4.5%	4.3%	4.1%	3.9%
624.16	12% ad val.	11.3%	10.6%	9.9%	9.3%	8.6%	7.9%	7.2%	6.5%
624.18	0.7c per lb.	5.8%	5.6%	5.3%	5.1%	4.9%	4.7%	4.4%	4.2%
624.20	5.5% ad val.	5.3%	5.1%	4.9%	4.7%	4.5%	4.3%	4.1%	3.9%
624.22	0.75c per lb.	2.9%	2.9%	2.8%	2.8%	2.7%	2.6%	2.6%	2.5%
624.24	5.5% ad val.	5.3%	5.1%	4.9%	4.7%	4.5%	4.3%	4.1%	3.9%
624.30	1.3125c per lb.	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%
624.32	1.5c per lb.	10.8%	10.1%	9.5%	8.9%	8.2%	7.6%	6.9%	6.3%
624.34	11.25% ad val.	10.6%	10%	9.4%	8.7%	8.1%	7.5%	6.8%	6.2%
624.40	1.5c per lb.	11.9%	11.9%	11.9%	11.9%	11.9%	11.9%	11.9%	11.9%
624.50	1.3125c per lb.	2.5%	2.5%	2.4%	2.3%	2.2%	2.2%	2.1%	2%
624.52	0.75c per lb.	5.8%	5.6%	5.3%	5.1%	4.9%	4.7%	4.4%	4.2%
624.54	5.5% ad val.	5.3%	5.1%	4.9%	4.7%	4.5%	4.3%	4.1%	3.9%
626.02	0.7c per lb.	1.9%	1.9%	1.8%	1.8%	1.7%	1.6%	1.6%	1.5%
626.10	0.75c per lb.	4.8%	4.6%	4%	3.7%	3.3%	2.9%	2.5%	2.1%
626.15	9.5% ad val.	9%	8.6%	8.1%	7.6%	7.1%	6.7%	6.2%	5.7%
626.17	0.5c per lb.	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%
626.18	0.56c per lb.	5.8%	5.6%	5.3%	5.1%	4.9%	4.7%	4.4%	4.2%
626.20	9.5% ad val.	9%	8.6%	8.1%	7.6%	7.1%	6.7%	6.2%	5.7%
626.22	9.5% ad val.	9.5%	9.5%	8.9%	8.2%	7.6%	7%	6.3%	5.7%
626.24	12% ad val.	11.3%	10.6%	9.9%	9.3%	8.6%	7.9%	7.2%	6.5%
626.30	6% ad val.	5.8%	5.6%	5.3%	5.1%	4.9%	4.7%	4.4%	4.2%
626.31	0.05c per lb. + 6% ad val.	5.8%	5.6%	5.3%	5.1%	4.9%	4.7%	4.4%	4.2%
626.35	9.5% ad val.	9%	8.6%	8.1%	7.6%	7.1%	6.7%	6.2%	5.7%
626.45	9.5% ad val.	8.8%	8.1%	7.4%	6.7%	5.9%	5.2%	4.5%	3.8%
644.17	0.75c per lb.	6.7%	6.4%	6.1%	5.9%	5.6%	5.3%	5%	4.7%
644.18	5.5% ad val.	5.3%	5.1%	4.9%	4.7%	4.5%	4.3%	4.1%	3.9%
644.20	9.5% ad val.	8.8%	8.1%	7.4%	6.7%	5.9%	5.2%	4.5%	3.8%
644.28	5.5% ad val.	5.1%	4.7%	4.3%	3.9%	3.4%	3%	2.6%	2.2%
644.30	9.5% ad val.	9%	8.6%	8.1%	7.6%	7.1%	6.7%	6.2%	5.7%

1/ The symbol "%" indicates percent ad valorem. The symbol "/" indicates per stated unit of quantity.

Appendix B

Concordance of TSUS Numbers, Schedule B Numbers, SIC Numbers
SITC Numbers, and CCCN Numbers

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Lead and zinc: TSUSA item numbers, Schedule B numbers, SIC numbers, SITC numbers, and CCCN numbers included in this commodity group

TSUS item No.	Schedule B No.	SIC No.	SITC No.	CCCN No.
624.0220	624.0220	3332	685.12	78.01
624.0240	624.0220	3332	685.12	78.01
624.0260	624.0220	3332	685.12	78.01
624.0330	624.0330	3332	685.13	78.01
624.0350	624.0350	3332	685.13	78.01
624.0400	624.0400	3356	685.12	78.01
624.1000	624.4600	3356	685.22	78.03
624.1200	624.4600	3356	685.22	78.03
624.1400	624.4600	3356	685.22	78.03
624.1600	624.4600	3356	685.22	78.03
624.1800	624.4600	3356	685.22	78.03
624.2000	624.4600	3356	685.22	78.03
624.2200	624.4600	3356	685.22	78.03
624.2400	624.4600	3356	685.22	78.03
624.3000	624.4600	3356	685.21	78.02
624.3200	624.4600	3356	685.21	78.02
624.3400	624.4600	3356	685.21	78.02
624.4000	624.4100	3332	685.11	78.04
624.4200	624.4600	3332	685.11	78.04
624.5000	624.4600	3356	685.24	78.05
624.5200	624.4600	3356	685.24	78.05
624.5400	624.4600	3356	685.24	78.05
626.0200	624.0200	3333	686.10	79.01
626.0400	624.0400	3333	686.10	79.01
626.1000	626.1000	3333	686.10	79.01
626.1500	626.2500	3356	284.08	79.03
			686.22	79.03
626.1700	626.2500	3356	284.08	79.03
			686.22	79.03
626.1800	626.2500	3356	284.08	79.03
			686.22	79.03
626.2000	626.2500	3356	284.08	79.03
			686.22	79.03
626.2200	626.2500	3356	284.08	79.03
			686.22	79.03
626.3000	626.2900	3356	686.31	79.02
626.3100	626.2900	3356	686.31	79.02
626.3500	626.3400	3356	686.31	79.02
626.4000	626.4100	3333	686.22	79.03
626.4200	626.4100	3333	686.22	79.03
626.4500	626.3400	3356	686.23	79.04
644.1700	644.2100	3497	685.23	78.04

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Lead and zinc: TSUSA item numbers, Schedule B numbers, SIC numbers, SITC numbers, and CCCN numbers included in this commodity group--Continued

TSUS item No.	Schedule B No.	SIC No.	SITC No.	CCCN No.
644.1800	644.2100	3497	685.23	78.04
644.2000	644.2100	3497	686.22	79.03
644.2800	644.2100	3497	685.23	78.04
644.3000	644.2100	3497	686.22	79.03

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Appendix C

Statistical Tables

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Table 1.--Lead: U.S. production, exports of domestic merchandise, imports for consumption, and reported consumption, 1977-81

(Quantity in short tons; value in thousands of dollars; unit value per short ton)

Year	Production	Exports	Imports	Reported consumption	Ratio (percent) of imports to consumption
	Quantity				
1977	1,440,034	95,251	270,009	1,582,000	17.1
1978	1,472,804	117,792	261,002	1,579,000	16.5
1979	1,521,014	143,737	211,484	1,497,000	14.1
1980	1,350,644	313,172	95,205	1,080,000	8.1
1981	1/ 1,177,000	91,205	115,497	1,026,000	11.3
	Value				
1977	2/	30,866	157,251	2/	2/
1978	2/	36,924	176,827	2/	2/
1979	2/	67,443	216,181	2/	2/
1980	2/	227,057	91,790	2/	2/
1981	2/	48,385	89,591	2/	2/
	Unit value				
1977	-	$324.05	$582.39	-	-
1978	-	313.47	677.49	-	-
1979	-	469.21	1,022.21	-	-
1980	-	725.02	725.02	-	-
1981	-	530.51	775.70	-	-

1/ Estimated.
2/ Not available.

Source: Compiled from official statistics of the U.S. Department of Commerce.

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Table 2.--Zinc: U.S. production, exports of domestic merchandise, imports for consumption, and reported consumption, 1977-81

(Quantity in of short tons; value in thousands of dollars; unit value per short ton)

Year	Production	Exports	Imports	Reported consumption	Ratio (percent) of imports to consumption
	Quantity				
1977	500,756	17,804	573,405	1,101,765	52.0
1978	486,639	23,043	700,615	1,158,070	60.5
1979	579,478	36,256	585,711	1,102,978	53.1
1980	407,000	41,580	461,951	894,134	51.7
1981	1/ 418,000	44,273	690,461	829,656	83.2
	Value				
1977	2/	11,135	368,281	2/	2/
1978	2/	14,540	395,569	2/	2/
1979	2/	21,826	366,093	2/	2/
1980	2/	28,203	325,616	2/	2/
1981	2/	32,372	562,332	2/	2/
	Unit value				
1977	-	$625.42	$642.27	-	-
1978	-	630.94	564.60	-	-
1979	-	602.00	625.04	-	-
1980	-	678.28	704.87	-	-
1981	-	731.19	814.43	-	-

1/ Estimated.
2/ Not available.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 3: --Unwrought lead and waste and scrap: U.S. exports of domestic merchandise, by principal markets, 1977-81

Market	1977	1978	1979	1980	1981
	Quantity (short tons)				
Canada	27,753	32,125	38,578	34,782	23,670
Nethlds	3,210	3,668	1,385	109,956	7,518
China t	7,134	9,633	18,193	18,494	9,818
Belgium	758	529	7,600	33,808	5,604
Mexico	6,530	11,950	10,437	10,115	12,214
U King	3,058	2,507	3,514	25,350	3,191
Japan	2,476	4,900	7,962	9,901	2,971
Rep Saf	2,421	3,917	11,852	1,041	4,329
All other	36,756	42,939	40,614	60,956	14,704
Total	90,096	112,218	140,135	304,403	84,019
	Value (1,000 dollars)				
Canada	5,603	8,022	15,227	13,581	8,624
Nethlds	1,255	1,754	1,308	93,617	5,627
China t	1,776	2,145	6,659	7,717	3,130
Belgium	179	385	3,464	34,462	3,072
Mexico	1,091	1,947	2,219	4,191	2,981
U King	2,185	2,557	3,144	17,260	2,497
Japan	1,237	1,290	2,278	6,421	2,051
Rep Saf	481	1,114	6,186	728	1,880
All other	11,680	11,388	22,878	37,995	8,053
Total	25,687	30,602	63,363	215,971	37,916
	Unit value (per short ton)				
Canada	$201.89	$249.72	$394.71	$390.46	$364.35
Nethlds	391.09	478.21	944.67	851.41	748.42
China t	248.88	221.50	366.00	417.28	318.84
Belgium	236.44	728.52	455.82	1,019.33	548.18
Mexico	167.07	162.89	212.58	414.32	244.08
U King	714.51	1,020.13	894.84	680.87	782.36
Japan	499.47	263.29	286.13	648.48	690.33
Rep Saf	198.75	284.29	521.90	699.38	434.36
All other	323.21	265.20	563.30	623.31	547.70
Average	285.11	272.70	452.16	709.49	451.27

1/ Less than 500.

Source: Compiled from official statistics of the U.S. Department of Commerce.

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Table 4.--Wrought lead: U.S. exports of domestic merchandise, by principal markets, 1977-81

Market	1977	1978	1979	1980	1981
	Quantity (short tons)				
Mexico	126	665	237	1,021	1,516
Canada	1,724	1,767	210	901	3,026
Belgium	1,865	1,855	1,512	1,687	1,918
China t	52	148	51	34	22
Japan	36	85	104	215	158
India	2	1	21	36	84
Phil R	56	8	61	7	47
Hg Kong	63	2	3	3	34
All other	1,226	1,043	1,403	4,865	381
Total	5,155	5,574	3,602	8,769	7,186
	Value (1,000 dollars)				
Mexico	393	1,689	966	3,262	4,988
Canada	1,450	1,841	319	1,087	2,889
Belgium	444	587	579	790	587
China t	85	117	155	352	335
Japan	99	161	177	215	266
India	6	3	90	142	262
Phil R	103	21	130	25	162
Hg Kong	67	5	9	9	146
All other	2,532	1,897	1,655	5,203	834
Total	5,179	6,322	4,080	11,086	10,469
	Unit value (per short ton)				
Mexico	$3,117.20	$2,540.15	$4,076.87	$3,194.84	$3,290.39
Canada	841.30	1,042.13	1,521.25	1,206.46	954.67
Belgium	237.95	316.51	382.63	468.51	306.05
China t	1,629.02	793.89	3,036.51	10,340.91	15,206.59
Japan	2,763.75	1,892.74	1,703.83	999.49	1,685.49
India	2,898.50	3,225.00	4,271.10	3,955.86	3,124.20
Phil R	1,842.71	2,592.25	2,124.38	3,599.71	3,444.91
Hg Kong	986.87	2,567.50	2,890.00	3,145.33	4,301.50
All other	2,065.17	1,818.69	1,179.83	1,069.41	2,188.60
Average	1,004.68	1,134.22	1,132.57	1,264.17	1,456.91

1/ Less than 500.

Source: Compiled from official statistics of the U.S. Department of Commerce.

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Table 5.--Unwrought zinc and waste and scrap: U.S. imports for consumption, by principal sources, 1977-81

Source	1977	1978	1979	1980	1981
	Quantity (short tons)				
Canada	241,424	291,701	289,345	312,179	345,879
Peru	21,048	11,293	8,151	4,355	47,773
Finland	32,559	36,337	27,734	19,983	32,139
Fr Germ	44,569	40,736	21,065	13,289	25,052
Spain	23,489	71,238	73,567	11,825	31,604
Zaire	35,486	31,558	16,346	0	31,460
Austral	29,262	38,344	37,172	27,335	28,473
Nethlds	8,793	12,278	3,505	7,174	23,055
All other	128,998	156,342	104,460	59,813	115,561
Total	565,628	689,827	581,345	455,953	680,996
	Value (1,000 dollars)				
Canada	160,677	173,534	198,695	223,665	288,015
Peru	13,130	6,002	5,488	2,798	37,836
Finland	21,115	21,535	20,298	12,998	25,231
Fr Germ	26,816	22,058	14,813	8,939	24,159
Spain	14,416	36,336	43,703	7,592	23,545
Zaire	23,733	16,913	11,767	-	22,778
Austral	19,612	21,992	25,634	18,046	22,043
Nethlds	3,196	6,365	2,314	5,183	18,010
All other	78,826	82,612	69,417	41,427	90,289
Total	361,521	387,346	392,131	320,649	551,904
	Unit value (per short ton)				
Canada	$665.54	$594.90	$686.71	$716.47	$832.70
Peru	623.79	531.48	673.27	642.40	791.99
Finland	648.50	592.64	731.90	650.46	785.06
Fr Germ	601.67	541.49	703.22	672.65	964.34
Spain	613.72	510.06	594.06	642.05	745.00
Zaire	668.80	535.92	719.88	-	724.05
Austral	670.23	573.53	689.59	660.19	774.16
Nethlds	363.52	518.41	660.32	722.49	781.16
All other	611.07	528.41	664.53	692.61	781.31
Average	639.15	561.51	674.52	703.25	810.44

1/ Less than 500.

Source: Compiled from official statistics of the U.S. Department of Commerce.

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Table 6.--Wrought zinc: U.S. exports of domestic merchandise, by principal markets, 1977-81

Market	1977	1978	1979	1980	1981
	Quantity (short tons)				
Canada	3,784	2,093	1,401	3,844	5,704
Mexico	129	218	250	270	493
S Arab	51	319	41	13	221
Phil R	178	204	163	272	209
Venez	337	226	78	668	224
U King	330	226	106	152	141
Singapr	9	23	45	256	142
Rep Saf	106	85	112	86	129
All other	3,940	2,035	2,488	2,617	1,177
Total	8,864	5,429	4,684	8,178	8,440
	Value (1,000 dollars)				
Canada	2,872	2,098	2,092	6,125	8,114
Mexico	144	240	466	489	884
S Arab	40	527	68	51	481
Phil R	222	246	227	355	333
Venez	407	260	106	827	319
U King	311	346	208	632	315
Singapr	23	44	36	362	233
Rep Saf	164	126	174	142	205
All other	3,235	2,634	3,298	3,587	2,155
Total	7,419	6,523	6,674	12,569	13,039
	Unit value (per short ton)				
Canada	$759.03	$1,002.60	$1,493.40	$1,593.38	$1,422.47
Mexico	1,117.49	1,102.80	1,863.58	1,809.49	1,792.95
S Arab	793.20	1,651.46	1,663.12	3,953.23	2,177.25
Phil R	1,244.43	1,205.64	1,389.93	1,303.59	1,595.31
Venez	1,208.58	1,151.62	1,356.90	1,237.84	1,423.51
U King	943.04	1,530.46	1,962.05	4,160.36	2,235.08
Singapr	2,595.22	1,928.13	790.38	1,413.11	1,633.54
Rep Saf	1,546.37	1,486.93	1,549.65	1,647.69	1,590.64
All other	821.06	1,294.57	1,325.46	1,370.52	1,830.61
Average	836.99	1,201.50	1,424.76	1,536.91	1,544.88

1/ Less than 500.

Source: Compiled from official statistics of the U.S. Department of Commerce.

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Table 7. --Unwrought lead and waste and scrap: U.S. imports for consumption, by principal sources, 1977-81

Source	1977	1978	1979	1980	1981
	Quantity (short tons)				
Canada	87,333	85,510	83,934	40,373	57,613
Mexico	84,424	89,417	82,768	32,415	37,885
Fr Germ	22,053	9,724	1,023	854	2,364
Austral	14,614	22,508	8,998	11,998	10,012
Peru	33,656	28,357	19,734	3,635	3,634
U King	3,191	2,314	1,333	751	1,577
Belgium	7,786	8,928	2,915	1,282	447
Ireland	0	0	0	0	89
All other	15,628	12,603	9,570	2,648	1,353
Total	268,685	259,361	210,275	93,956	114,974
	Value (1,000 dollars)				
Canada	53,144	57,442	83,378	32,901	40,066
Mexico	46,593	55,111	77,141	28,443	25,518
Fr Germ	13,088	9,481	5,529	4,602	8,903
Austral	7,415	13,929	6,737	11,464	6,505
Peru	18,744	17,005	19,388	2,974	2,424
U King	2,445	2,006	1,995	1,085	2,269
Belgium	5,063	11,452	11,026	5,567	1,666
Ireland	-	-	-	-	390
All other	8,936	8,184	9,152	3,245	1,123
Total	155,432	174,610	214,347	90,282	88,864
	Unit value (per short ton)				
Canada	$608.53	$671.76	$993.38	$814.93	$695.43
Mexico	551.89	616.33	932.02	877.48	673.57
Fr Germ	593.47	975.00	5,405.17	5,389.28	3,766.01
Austral	507.37	618.85	748.70	955.47	649.70
Peru	556.92	599.66	982.45	818.28	666.97
U King	766.06	867.11	1,496.75	1,444.41	1,438.97
Belgium	650.95	1,282.74	3,782.64	4,342.55	3,727.84
Ireland	-	-	-	-	4,382.58
All other	571.78	649.34	956.37	1,225.42	830.17
Average	578.49	673.23	1,019.37	960.90	772.91

1/ Less than 500.

Source: Compiled from official statistics of the U.S. Department of Commerce.

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Table 8--Wrought lead: U.S. imports for consumption, by principal sources, 1977-81

Source	1977	1978	1979	1980	1981
	Quantity (short tons)				
Canada	699	1,163	748	309	224
Mexico	256	16	226	650	195
Fr Germ	104	49	64	63	56
Italy	0	0	0	1	21
Belgium	0	0	0	13	12
China t	0	0	10	1	4
Japan	4	0	0	1	4
U King	23	2	44	9	5
All other	208	411	117	1	2
Total	1,324	1,641	1,209	1,048	523
	Value (1,000 dollars)				
Canada	489	979	911	544	343
Mexico	181	10	166	647	164
Fr Germ	162	75	135	119	85
Italy	-	-	1	2	33
Belgium	1	1	1	149	20
China t	-	1	9	2	26
Japan	13	2	1/	3	23
U King	100	6	58	36	17
All other	873	1,144	553	5	6
Total	1,819	2,217	1,834	1,508	727
	Unit value (per short ton)				
Canada	$699.25	$842.02	$1,217.72	$1,762.11	$1,531.25
Mexico	633.49	629.19	736.03	995.64	842.78
Fr Germ	1,561.01	1,522.71	2,111.63	1,892.84	1,511.64
Italy	-	-	-	2,163.00	1,581.62
Belgium	-	-	-	11,499.31	2,435.42
China t	-	-	890.00	1,944.00	6,388.00
Japan	3,312.25	-	-	2,687.00	5,766.75
U King	4,356.00	2,964.50	1,316.43	3,980.11	3,440.60
All other	4,194.78	2,783.61	4,724.96	5,187.00	3,149.50
Average	1,374.09	1,350.99	1,516.86	1,439.12	1,389.20

1/ Less than 500.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 9. --Unwrought zinc and waste and scrap: U.S. exports of domestic merchandise, by principal markets, 1977-81

Market	1977	1978	1979	1980	1981
	Quantity (short tons)				
Belgium	1,501	2,814	9,173	7,536	10,628
U King	967	976	1,251	595	1,826
Fr Germ	1,058	2,609	3,737	2,569	8,077
China t	1,840	3,513	6,292	7,303	5,356
India	0	1,262	2,394	3,403	3,090
Canada	1,706	593	919	1,323	1,476
Japan	955	1,932	1,353	2,563	2,277
Nethlds	1	433	121	3,670	353
All other	912	4,284	6,332	4,440	750
Total	8,940	17,616	31,572	33,402	33,555
	Value (1,000 dollars)				
Belgium	583	515	2,774	2,625	5,494
U King	241	1,286	2,265	1,366	3,280
Fr Germ	397	2,423	2,535	1,394	3,223
China t	714	973	2,575	2,810	2,561
India	-	416	960	1,481	1,400
Canada	916	513	553	868	1,127
Japan	244	384	252	755	669
Nethlds	3	130	168	1,519	535
All other	619	1,376	3,071	2,815	993
Total	3,716	8,017	15,152	15,634	19,333
	Unit value (per short ton)				
Belgium	$388.16	$255.80	$302.36	$348.38	$516.98
U King	249.18	1,317.38	1,810.47	2,296.21	1,796.16
Fr Germ	374.79	928.56	678.44	542.69	399.08
China t	388.29	277.10	409.20	384.84	478.18
India	-	329.60	400.88	435.09	453.20
Canada	536.68	864.64	602.27	656.30	763.46
Japan	255.53	198.97	185.90	294.53	293.66
Nethlds	2,909.00	301.36	1,395.31	413.93	1,658.29
All other	678.51	321.30	484.99	633.92	1,324.33
Average	415.65	455.10	479.91	468.05	571.43

1/ Less than 500.

Source: Compiled from official statistics of the U.S. Department of Commerce.

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Table 10.--Wrought zinc: U.S. imports for consumption, by principal sources, 1977-81

Source	1977	1978	1979	1980	1981
	Quantity (short tons)				
Canada	3,808	4,415	3,352	4,024	4,822
U King	642	812	516	428	1,675
Mexico	1,459	1,475	41	144	1,302
Spain	490	655	0	0	662
Belgium	696	1,218	92	122	363
Fr Germ	223	820	42	1,160	259
France	212	850	51	16	194
Japan	62	0	0	0	42
All other	185	543	272	104	146
Total	7,777	10,788	4,366	5,998	9,465
	Value (1,000 dollars)				
Canada	3,565	3,509	2,890	3,246	5,256
U King	588	647	435	407	1,744
Mexico	1,145	1,079	39	101	1,328
Spain	329	409	-	-	617
Belgium	583	942	123	161	593
Fr Germ	223	698	132	918	470
France	169	601	45	19	176
Japan	44	2	7	4	93
All other	114	337	255	111	154
Total	6,760	8,223	3,926	4,967	10,430
	Unit value (per short ton)				
Canada	$936.16	$794.70	$862.08	$806.55	$1,089.90
U King	915.48	796.67	843.63	950.14	1,040.92
Mexico	784.89	731.65	952.59	701.01	1,019.66
Spain	670.82	624.39	-	-	932.26
Belgium	837.30	773.24	1,332.21	1,323.52	1,634.20
Fr Germ	1,001.24	850.80	3,138.79	791.79	1,816.19
France	798.36	707.59	879.80	1,196.88	906.12
Japan	706.93	-	-	-	2,203.62
All other	618.65	620.54	938.27	1,068.81	1,054.83
Average	869.24	762.27	899.14	828.15	1,101.93

1/ Less than 500.

Source: Compiled from official statistics of the U.S. Department of Commerce.

SUMMARIES OF TRADE AND TARIFF INFORMATION

USITC PUBLICATION 841

COMPLETE LIST OF SUMMARIES PUBLISHED TO DATE IN SCHEDULE 6

Control No.	Publication date	Title
6-4-1	March 1981	Construction, Mining, and Material-Handling Machinery
6-5-2	April 1981	Ignition Equipment and Lighting Equipment for Motor Vehicles; Batteries
6-5-3	May 1981	Electrical Capacitors and Resistors
6-4-4	May 1981	Metalworking Machine Tools
6-4-5	June 1981	Typewriters Not Incorporating a Calculating Mechanism
6-6-6	July 1981	Motorcycles
6-4-7	July 1981	Printing and Typesetting Machinery and Printing Plates
6-6-8	July 1981	Rail Locomotives and Rolling Stock
6-5-9	July 1981	Television Cameras
6-4-10	July 1981	Ball and Roller Bearings and Parts
6-5-11	July 1981	Electrical Equipment for Making, Breaking, Protecting, or Connecting Circuits
6-5-12	Aug. 1981	Radio Apparatus
6-4-13	Sept. 1981	Computers, Calculators, and Data Processing Machines
6-4-14	Sept. 1981	Sewing Machines
6-1-15	Feb. 1982	Ores and Concentrates and Other Metal-Bearing Materials
6-5-16	Feb. 1982	Electronic Tubes and Parts
6-5-17	Mar. 1982	Portable Electric Lamps and Electric Lamp Bulbs
6-2-18	Apr. 1982	Aluminum

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